FINDINGS OF THE FRASER VALLEY ACCESS COMMITTEE

A Report Submitted to the Minister of Advanced Education, Training and Technology

by

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FOREWORD

Post-secondary education enriches the lives of individuals and contributes decisively to the social, cultural and economic development of British Columbia. The Report of the Provincial Access Committee adds strength to this conviction while making clear that improved access to advanced education and job training in British Columbia deserves immediate attention province-wide. Without exception, the members of the Fraser Valley Access Committee whole-heartedly endorse the recommendations in the Provincial Access Report and applaud the government of British Columbia's policy response.

The general problem of increased access to post-secondary education is magnified and made more extreme in the Fraser Valley where a rapidly expanding population is placing demands on post-secondary education that are unparalleled elsewhere in British Columbia. The obstacles to improved educational access in the region are great — but no greater than the opportunities to overcome them. It is in this spirit that the joint findings of the Fraser Valley Access Committee are offered.

EXECUTIVE SUMMARY

The Fraser Valley Access Committee was convened at the request of the Ministry of Advanced Education, Training and Technology to make proposals for improved post-secondary educational access in the Fraser Valley. The Committee investigated the combined influence of population growth, demographic change and higher participation rates on regional access demand and identified the special barriers to accessibility presented by a deteriorating transportation infrastructure and insufficient institutional capacity.

An analysis of province-wide patterns of population and demographic change shows that the Fraser Valley is essential to the success of the government's participation rate policy: no other source of student supply in British Columbia is large enough to increase post-secondary participation to the target level. Population growth in the Fraser Valley drives all other planning considerations and the shortfall between student "demand" and institutional "supply" will soon reach crisis proportions.

Fraser Valley College, Kwantlen College, Douglas College and Simon Fraser University each prepared an institutional profile that includes estimates of institutional growth required to serve their respective constituencies adequately. Although these estimates are justifiable on the basis of projected access demand, the aggregate growth in institutional capacity they propose cannot reasonably be achieved over the coming decade. Their importance lies in illustrating that the "best case" scenario for expanded institutional capacity would still fall short of access demand.

Given the dimensions of the problem, short-term solutions are unavailable. The Committee recommends an access strategy that allows institutional and curriculum planning to take place over two five-year development phases.

During the period 1989-1994, the most suitable response is to begin adding capacity at those institutions already given responsibility for the region's higher educational needs. Complementing this activity, planning should commence at once for the creation of additional academic program

capacity in a new degree-granting institution. Cooperative planning arrangements involving the region's three Colleges and the University should be put in place immediately to promote better program articulation, facilitate student transfer, stimulate extension program development, and deliver a public information campaign promoting the benefits of higher education and seeking community response.

The strategy for the 1995-1999 planning period will be contingent on the extent to which institutional capacity has been increased and on the existence of a new degree-granting institution in the region. It is certain, however, that access pressure will continue to escalate throughout the final five-year planning cycle.

The Fraser Valley Access Committee believes that it has succeeded in responding to the problem it was asked to address. If prompt action is taken and the necessary resources secured, the full benefit of post-secondary education will be accessible to the region a decade from now.

My government believes that advanced education is an investment by society in its future.
(Speech from the Throne, March, 1989)

If British Columbia is to share in the benefits of the emerging economic and social era, and contribute to the solution of provincial, national and international problems that will inevitably accompany that era, our advanced education and job training efforts must not only allow us to catch up with other parts of Canada but also to keep pace with the increase in participation and successful completion rates currently being pursued in other parts of the world.
(Report of the Provincial Access Committee)

1. BACKGROUND

Improving access to advanced education and job training in British Columbia is now very much a part of the province's public policy agenda. With the release in September 1988 of the Provincial Access Committee's Report, *Access to Advanced Education and Job Training in British Columbia,* attention has concentrated on developing fresh initiatives to expand post-secondary opportunities across all regions of the province. Building directly on the Provincial Access Committee's recommendations, the March 1989 Throne Speech announced that the Ministry of Advanced Education, Training and Technology would introduce programs to strengthen the post-secondary system and the Ministry responded by unveiling its "Access for All" strategy.

Along with challenging new proposals for the development of degree-granting University/Colleges in Nanaimo, Kamloops and Kelowna, and with a commitment in principle to a self-governing degree-granting institution in Prince George, the Access Strategy reinforced the government's objective of raising British Columbia's participation rates to the national average by 1995. The announcement also reinforced the Provincial Access Committee's observation that the Fraser Valley has the fastest-growing population in the

province and asked Simon Fraser University, in consultation with Fraser Valley College and Kwantlen College, to develop by year-end a plan outlining ways to meet the growing needs of the Fraser Valley for university and college programs. At an early stage, the Ministry included Douglas College as a full partner in the planning exercise in recognition of the College's important contribution to the region.

The presidents of the four institutions met in mid-April to determine how they might best cooperate to assess the broad questions surrounding educational access in the Fraser Valley student catchment area. Out of this meeting came two new initiatives: the Fraser Valley Access Committee was formed and a Demographic Task Force was assembled. The Task Force set out to survey Lower Mainland population and participation rate forecasts with an emphasis on growth projections for Fraser Valley communities. The work of the Demographic Task Force was completed with the submission of its report in June, 1989.

Toward the end of April, in a related but independent exercise, Simon Fraser University established an internal working group known as the Fraser Valley Planning Committee. The Planning Committee's terms of reference included the development of academic and administrative proposals for an SFU-Fraser Valley Campus on the possibility that a physical SFU presence in the region might be a viable option within an overall strategy of improved educational access in the Fraser Valley. Distributed within SFU in September as part of an in-house consultative process, *The Report of the Fraser Valley Planning Committee* presented a conceptual blueprint for a new campus with a distinct mission and identity that would complement "the educational opportunities now provided by Simon Fraser and by other post-secondary institutions in the Province of British Columbia."

Informed by these two activities, the Fraser Valley Access Committee continued to meet regularly throughout the summer and fall. The presidents of Fraser Valley College, Kwantlen College, Douglas College and Simon Fraser University, supported by academic and administrative personnel in their institutions, pressed forward with an evaluation of alternative strategies. At an early stage, the University/College model was looked at in depth

and found not to be appropriate for the region (Appendix I). Dr. Peter Jones of Fraser Valley College subsequently submitted a proposal for a Fraser Valley Advanced Education Centre. Based generally on the Gwinnett Center in Georgia, the model he proposed was also set aside following careful review by the Committee. As work progressed into November, consensus was reached on an appropriate access strategy for the region. The conclusions the Committee has drawn and the recommendations it brings forward confirm that collective remedies are available through continued institutional cooperation and decisive government action.

2. BARRIERS TO ACCESS

In an otherwise excellent and comprehensive report, the Provincial Access Committee failed to give adequate attention to the Fraser Valley. For the most part, the region's educational needs parallel those found elsewhere in the province and include concerns about institutional capacity, geographic barriers and changing levels of participation by "non-traditional" students.

For the purposes of the Fraser Valley Access Committee, the Fraser Valley is defined geographically as those Lower Mainland communities located south of the Fraser River and east of the Pitt River. Lower Mainland communities from Vancouver to Chilliwack are forecast to grow by 640,000 people over the next two decades. Out of this total, approximately 500,000 will take up residence in the Fraser Valley — adding more than 50% to the current population base. By contrast, Vancouver's share of the Lower Mainland's population will decline from 37% to less than 25% over the same period.

Growth in population will be accompanied by growth in access demand and the resulting enrolment pressure will be compounded by the government's intention to raise post-secondary participation rates. But increased access demand by students is only one outcome that can be predicted. Rapid population growth also has other less obvious effects, including raising barriers to student mobility. Over the next decade, congestion in the transportation network connecting Fraser Valley communities to the rest of the Lower Mainland will approach gridlock unless a very large capital investment is made to increase the number of river crossings and to upgrade the transportation infrastructure. The Delcan study, *A Transportation Planning Overview for the Province of British Columbia* (Ministry of Transportation and Highways, Vol. 1, October 1988, p. 1-16), confirms this view and points out that "extremely high traffic volumes due to daily commuting" are producing "major congestion due to limited capacity available on the existing facilities." Bridges spanning the Fraser River are cited as "a major concern because demand exceeds capacity for several hours of each day."

These obstacles are no less significant than the geographic barriers affecting people in outlying regions of British Columbia. Geographic barriers

to access are not simply a function of distance: if distances exceed a reasonable threshold of tolerance, it makes little difference whether they are thirty or three hundred miles.

It is worth noting that the transportation bottleneck is now felt most keenly by those Fraser Valley residents who must commute to the Lower Mainland's provincial universities or to college programs outside their home region. As it now stands, many of these individuals face virtually the same pressure to relocate as their student colleagues from more distant areas of British Columbia. Although present hardships should not be understated, students from communities such as Matsqui, Chilliwack and Langley will soon face interminable delays and almost prohibitive difficulties when required to travel outside their region.

Adding urgency to the region's access problem, the Demographic Task Force's analysis leaves no doubt that enrolment pressure originating in the Fraser Valley outstrips existing institutional capacity. The system's ability to absorb students sets an upper limit on the number of students who can be admitted. In particular, the ability of the Lower Mainland's provincial universities to accept more undergraduate students is impeded by resource limitations. If this situation remains unchanged, much of the burden to provide lower division university programs will fall to the region's already hard-pressed colleges. At the same time, mounting pressure on non-academic programs will push the colleges toward saturation point.

Shifts in demographic composition also will affect the region's post-secondary institutions by changing the student profile and enlarging the pool of mature students. In the past, a great deal of attention was paid to "traditional" full-time students in the 18 to 24 year-old age cohort but higher education today is evolving away from a full-time commitment over a few years to a part-time commitment over a lifetime. Accordingly, mid-career upgrading, lifelong learning and recurrent adult education are beginning to occupy a more elevated station on the educational agenda across North America. Consider that over 50 percent of Simon Fraser University's students were enrolled part-time during the 1988/89 academic year. With their dedication to accessibility, colleges in the Fraser Valley report a similar distribution

between part-time and full-time learners. Seen in this light, "Access for All" becomes a strategy to extend educational opportunities not only geographically, but to all age groups as well. As a hidden function of population growth, therefore, mature and part-time students are likely to constitute a larger share of the total student supply and add to the increased demand for educational services.

Another factor should be recognized when evaluating the effect lifelong learners will have on the post-secondary system. An adult learner's first priority often rests with job or family. Mature students — particularly homemakers, working spouses and single parents — face special constraints on their ability to travel beyond their home regions in search of educational services.

The implications for the Fraser Valley are clear. A dramatically expanding population, a new participation rate policy, the impending transportation system breakdown, limits to institutional capacity, demographic change and the trend toward lifelong learning are provoking an access crisis in the Fraser Valley that is greater than in any other area of British Columbia. It is heartening to know, however, that this crisis can be avoided if concerted and timely steps are taken over the coming decade.

3. THE PLANNING PARTNERS

Institutions with different missions work together most effectively when they respect the factors which make them distinct and recognize where they are complementary. From the outset the Fraser Valley Access Committee has been sensitive to the two educational jurisdictions represented in its membership. One notable characteristic distinguishing them has to do with the constituencies each serves. Colleges are particularly responsive to local community priorities while the position of universities in the post-secondary system is not so closely defined by geographic location and extends to provincial, national and international clienteles.

Equally important, colleges are comprehensive institutions offering a full range of adult basic education, lower division university and university transfer courses, continuing education services, career/technical and vocational instruction. Universities are more specialized, delivering programs at the graduate and undergraduate levels and emphasizing research along with instruction. And where colleges are committed to the principle of universal or "open" accessibility, universities determine student access primarily on the basis of academic proficiency.

Although differences in educational roles set colleges and universities apart, the institutions represented on the Fraser Valley Access Committee have many features in common. They all operate under provincial authority, receive public funds, serve the public interest and are publicly accountable. They all provide quality, learner-centred instruction and offer lower division academic courses for degree credit. They cater to the needs of mature and part-time students and are committed to lifelong learning, continuing education, extension programming and mid-career skills upgrading. All help supply a well-educated work force, contribute equally to the solution of community problems, provide community access to their human and physical resources, stimulate community economic development and enliven their social, cultural and recreational environments.

Such rich common ground made for easy association between the Fraser Valley Access Committee's institutional partners. Where areas of

shared responsibility were identified, the Committee's collective expertise was called into play. When issues arose that were exclusively university business, they were left to Simon Fraser to address. Where planning considerations centred solely on college interests, they were left to the colleges for cooperative solution. Each of the four institutions was given the added responsibility of devising an access plan specific to its own circumstances. It follows that the findings and recommendations of the Fraser Valley Planning Committee reflect either their collective origins or the distinctive points of view brought by the two kinds of institutions to the planning table.

The Fraser Valley Access Committee recognized that when colleges engage in institutional planning, especially where there are long-range implications for capital and operating budgets, the comprehensive nature of their operations does not allow them to treat university and university transfer programs in isolation from their overall educational portfolio. The Committee members also recognized that the Fraser Valley's access needs encompass the full range of post-secondary educational services and are not restricted to academic programs alone. The assessment of these needs and the proposals for their alleviation naturally fell to the colleges to determine.

This division of labour notwithstanding, all of the Fraser Valley Access Committee's recommendations received the unanimous support of its full membership.

4. PLANNING PRINCIPLES AND ASSUMPTIONS

Seeking a common starting point for their cooperative effort to improve post-secondary access in the region, the Fraser Valley Access Committee identified a set of joint principles and planning assumptions.

- The population-driven demand for access to post-secondary education is growing faster in the Fraser Valley than in any other region of British Columbia.

- Even before population growth is taken into account, participation rates for post-secondary education in the Fraser Valley lag well behind the provincial average and even more significantly behind the national average.

- Fraser Valley College, Kwantlen College, Douglas College and Simon Fraser University share primary responsibility for redressing the region's access shortfall.

- The number of full-time equivalent post-secondary students from the Fraser Valley enrolled at institutions outside the region will remain constant:

    - as regional access opportunities improve
    - as the ability to absorb additional students from the Fraser Valley at other Lower Mainland institutions declines and
    - as new students are attracted to specialized programs offered in the region.

- The objective over the next decade is to raise the region's participation rates in university, university-transfer, career/technical, adult basic education and vocational programs to at least their respective national averages.

- Improved access in the Fraser Valley calls for the differentiated yet coordinated involvement of the region's three colleges and the university.

- Adequate planning horizons and assured funding must accompany all new access initiatives in the region.

- Priority must be given to expanding the service capacity at each of the four institutions and building upon the unique strengths each now displays.

- The integrity of the region's post-secondary system can be increased by establishing an on-going arrangement through which the four institutions will cooperatively perform the following functions:

    - produce greater articulation in post-secondary programming
    - coordinate cost-effective growth in educational access for local residents
    - facilitate the transfer of students between institutions
    - ensure the availability of university and university transfer programs
    - communicate post-secondary educational opportunities to local communities through public information initiatives

- Planning should commence for the establishment within five years of a new degree-granting presence in the Fraser Valley, complete with graduate instruction and research programs, on a site located at convenient commuting distance from the region's emerging population centres.

- Initiatives to improve post-secondary access in the Fraser Valley must emphasize instructional quality and affirm the belief in lifelong learning by addressing the needs of non-traditional, mature and part-time students as well as the needs of full-time students in the traditional 18-24 year age cohort.

5. INSTITUTIONAL PROFILES

5.1 General

Colleges in British Columbia work closely with surrounding communities to identify local needs and to design educational programs to meet them. In contrast, the disciplinary and programmatic organization at a university is not so closely conditioned by local priorities. But when either a college or a university plans its institutional future, changing levels of student demand influence most other planning considerations.

Recognizing that the projected growth rates and demographics for the Fraser Valley differ from community to community, the Fraser Valley Access Committee chose to identify the unique relationships which exist between its members and their respective catchment areas before generating an integrated development plan. Using common guidelines, each institution prepared a profile that gives a brief environmental sketch, reviews program mix, comments on present and projected enrolment capacity, and estimates facilities needs over the next decade.

The Committee's access strategy for the Fraser Valley contains two phases — with the second dependent on the successful implementation of the first — and projections about institutional capacity are made for each of two five-year planning periods: 1989-1994 and 1995-1999. Although some predictions carry into the decade beyond the turn of the century, their somewhat speculative nature is acknowledged.

The enrolment projections take into account the government's policy of raising participation rates to the national average and are based on the assumption that student migration from the Fraser Valley to other institutions of higher learning in the Lower Mainland will either hold steady or decline as new access opportunities become available in the region. Enrolment projections for a new degree-granting presence in the Fraser Valley include a modest estimate of attendance by students from outside the region. If students cannot earn degrees locally by 1995, the projections in each profile for the second planning phase will inflate significantly.

Three issues deserve special mention. First, the members of the Fraser Valley Access Committee appreciate that it will require more than the infusion of new resources to raise participation rates to the national average: regional attitudes toward higher education must change before the national participation rate target can be reached. With the Ministry's support, Fraser Valley College, Kwantlen College, Douglas College and Simon Fraser University are prepared to design and deliver a public information campaign aimed at raising educational awareness in the region.

Second, province-wide patterns of population growth and demographic change show that the Fraser Valley is essential to the success of the government's participation rate policy. No other source of student demand in British Columbia is large enough to increase post-secondary participation rates to the target level that has been established.

Third, all members of the Fraser Valley Access Committee recognize the extraordinary difficulties that would have to be overcome in order to meet the enrolment projections appearing in the institutional profiles. This recognition is based on an assessment of factors influencing the ability to absorb additional full-time equivalent (FTE) student demand. Because all member institutions organize instruction on a semester basis, it follows that 10 new course enrolments are needed annually to produce one additional FTE. Very large increases in FTE enrolments therefore raise questions about the speed with which new programs can be developed and integrated into existing curriculum. While the resources needed to reach the enrolment projections may challenge credibility, the student demand that has been forecast remains very real indeed.

5.2 Summarized Institutional Profiles
A. Fraser Valley College

The Fraser Valley College region now registers a population of 166,000 spread across the Abbotsford, Mission, Agassiz and Hope School Districts. The region's western sector claims the highest population density and is expected to remain the growth leader over the next decade. Population will approach a quarter million people by the end of the century, an increase of 29 percent in ten years.

The growth rate for Grade XII enrolments, driven in part by the in-migration of new families to the area, is expected to rise by 15 percent in 1990 and by 20 percent in 1991. Fraser Valley College provides access to 79 percent of the total post-secondary enrolments and 65 percent of all academic post-secondary enrolments originating within its region — regional retention rates unmatched by any other post-secondary institution in the Lower Mainland or Fraser Valley.

As the area served by Fraser Valley College becomes more urbanized during the next ten years, greater emphasis will be placed on academic and career/technical programs while vocational programs will decline slightly as a proportion of total enrolments. A similar decline in demand for adult basic education is predicted although it will be partially offset by increased access pressure on English Language Training services.

Enrolment capacity can be measured by dividing the total number of full-time equivalent students (FTE) a post-secondary institution serves by 1000 population. Fraser Valley College's present enrolment capacity is 11.56 FTE/1000 and growth above this level will be concentrated in the coming five years. The 1989-1994 development plan is based on the assumption that post-secondary participation rates in the region should rise to the current provincial average (estimated for planning purposes at 33.3 FTE/1000) by 1994 and that Fraser Valley College should continue to retain at least its present share of the region's post-secondary student population. Applying these assumptions, the College's FTE enrolments should increase by 3100 or 161 percent during the next five years. In the second five-year planning phase,

it is anticipated that a national participation rate — conservatively estimated by the College's planners at 40 FTE/1000 — should be reached in the College's catchment area. Predicting once again that Fraser Valley College will maintain its traditional share of all enrolments originating within the region, reaching this target would require access for an additional 1750 FTE between 1995 and 1999.

A building program to expand the space inventory at all Fraser Valley College locations should be completed by September 1995 if the enrolment growth targets are to be met. In the 1989-1994 planning cycle, the Abbotsford Campus presents the most critical need for new facilities. As the enrolment targets set for the second planning phase are approached, it is estimated that 30,980 square metres will have to be added to the 1989 space inventory to accommodate student demand.

B. Kwantlen College

The region served by Kwantlen College comprises the Richmond, Delta, Surrey and Langley School Districts with a population growing faster than any other British Columbia locality. By 1994, 68,000 people will be added to the half million already resident in the region for a five-year increase of 13 percent. An additional 12 percent rise is anticipated by 1999, bringing the regional count to 644,000. Transition rates from high school to higher education will improve significantly over the next decade and the number of Grade XII graduates will be more than double that of any other college region in the province, rising 23 percent overall and 46 percent in Surrey alone.

Enrolment growth will be accompanied by a shift in program mix. Career/technical and vocational programs will receive less emphasis as academic programs increase their share of total enrolments. Adult basic education will hold relatively constant at approximately 10 percent of Kwantlen's educational portfolio.

The College's planners would like to see Kwantlen's enrolment capacity — currently 7.2 FTE/1000 population or 3600 FTE — reflect the region's spectacular population growth. They foresee a 162 percent increase in enrolments by the 1994/95 academic year, adding 5970 FTE to the current base. A target of 25 FTE/1000 for 1999 would produce another 6340 FTE rise for a total enrolment increase over ten years of 334 percent.

Without permanent facilities at present, Kwantlen College is about to launch an extensive building program. The new Surrey Campus Phase I development is expected to open by fall 1990 and a permanent campus for Richmond is in the planning stage. Approval will be sought for a Langley Campus with the expectation that it will be ready for occupancy in September, 1992. The Surrey Campus Phase II expansion is hoped to be completed the following year. Between 1995 and 1999, the planning and development of a Langley Campus expansion, space upgrading at the Newton Campus, and new facilities in Delta and South Surrey will be required.

C. Douglas College

The School Districts of Burnaby, New Westminster, Coquitlam and Maple Ridge/Pitt Meadows make up the Douglas College region. It includes communities ranging from well-established, highly urbanized centres such as New Westminster to largely rural neighbourhoods north of the Fraser River in the region's eastern sector. Led by Coquitlam and Maple Ridge, rapid population growth is anticipated in the first half of the coming decade, tapering off in the second. Over the full ten year period, the population will expand by 17 percent, adding 64,000 people to the current base of 379,000.

The western sector of the Douglas College region falls outside the Fraser Valley's boundaries and includes two other post-secondary institutions that compete with Douglas for its student market: Simon Fraser University and B.C.I.T. Nevertheless, the College enrols 35 percent of the Grade XII graduates in the region who go on to higher education and demand for access to the College's programs is expected to remain high.

Over the coming years, the College's planners foresee the emergence of a greater emphasis on vocational instruction. By the end of the ten-year planning period, university and university transfer programs will make up 39 percent of total FTE enrolments, career/technical programs will account for 34 percent, while vocational and adult basic education will represent 17 and 10 percent respectively.

In one of the models used when determining the enrolment shortfall for the Fraser Valley region, the Fraser Valley Access Committee excluded projections about Burnaby, New Westminster and Coquitlam from its calculations. But when assessing overall enrolment capacity, the planners at Douglas College properly based their analysis on its region as a whole. With this caveat, Douglas College now has an overall enrolment capacity of 11 FTE/1000 and anticipates moving to 18 FTE/1000 by the 1994/1995 academic year. The 1999 target has been set at 23 FTE/1000, adding 6630 FTE to the current enrolment base of 4340 FTE over ten years.

Douglas College's facilities are now at full capacity. Renovations are being completed at the College's Royal Avenue Campus in New Westminster and development of the Thomas Haney Centre in Maple Ridge is proceeding. Plans also are underway for a permanent campus in Coquitlam. Assuming that these additions to the space inventory will be in place by 1994, facilities growth over the next five-year planning phase will consist of a modest development in Burnaby and an equally modest expansion at the New Westminster Campus.

D. Simon Fraser University

The environment affecting institutional planning at Simon Fraser differs from that of the Colleges. The University's unique constituencies, along with the traditions originating in its past, must be taken into account when preparing for the future. Over the period 1989-1994, the growth targets assigned to SFU under the "Access for All" strategy, the recommendations expected from the B.C. Council on Admissions and Transfer, and the findings of the Steering Committee on Three Year Planning will have a major effect on the University's development.

As Simon Fraser sets out to consolidate resources at its Burnaby Mountain Campus, existing resource shortfalls will have to be rectified before new enrolment growth can be absorbed. Increases in the faculty complement will be required to support higher enrolments and there will be intense recruitment competition as the international supply of qualified university faculty declines.

Planning for growth will be accelerated in all academic units. The development process will concentrate on strengthening academic programs in which Simon Fraser already has established national or international reputations and adding new programs designed to meet emerging provincial and national needs.

The "Access for All" strategy requires enrolment increases at Simon Fraser averaging 600 undergraduate and 65 graduate FTE annually for the next five years. Total graduate enrolments are expected to reach 1,565 FTE by the 1994/95 academic year and the undergraduate population will rise to 13,800 FTE. Extension services in the Fraser Valley are expected to serve an annual enrolment of 260 undergraduate FTE by the end of the first five-year planning cycle.

The University's facilities needs are identified in a Five Year Capital Plan submitted to the Ministry in September, 1989. The existing space shortfall is over 325,000 net assignable square feet and special requests have been made to fast-track new construction. Based on current projections, the Uni-

versity will continue to experience a space inventory shortfall in 1995, even if all capital projects identified in the Five Year Capital Plan are implemented.

Simon Fraser University hesitates to make predictions about program mix, enrolment demand or facilities needs beyond 1994: the existence of a new degree-granting institution in the Fraser Valley will significantly affect SFU's development plans. What is known, however, is that enrolment pressure will intensify during the late 1990s as the demographic "echo boom" enters the post-secondary system.

5.3 Summary — Full-Time Equivalent Student (FTE) Enrolment Capacity Predictions Based on Institutional Plans

	Simon Fraser	Fraser Valley Degree-Granting Institution	Douglas College	Kwantlen College	Fraser Valley College	TOTAL	5-Year Increase
Academic Undergraduate							
89/90	11091		1660	1380	670	14801	
94/95	13791	1000	3020	4350	2000	24161	9360
99/00	14003	3900	3950	7200	2780	31833	7672
Graduate							
89/90	1214					1214	
94/95	1565	65				1630	416
99/00	1615	420				2035	405
Adult Basic Ed.							
89/90			320	350	290	960	
94/95			570	920	600	2090	1130
99/00			970	1520	840	3330	1240
Career/Technical							
89/90			1750	1130	570	3450	
94/95			2750	2420	1600	6770	3320
99/00			3480	4000	2070	9550	2780
Vocational							
89/90			610	830	390	1830	
94/95			1300	1980	820	4100	2270
99/00			1700	3280	1080	6060	1960
TOTAL							
89/90	12305		4340	3690	1920	22255	
94/95	15356	1065	7640	9670	5020	38751	16496
99/00	15618	4320	10100	16000	6770	52808	14057

6. ENROLMENT AND PARTICIPATION RATE SHORTFALLS

6.1 General

Following extensive consultation, the Ministry of Advanced Education, Training and Technology adopted the objective of raising British Columbia's post-secondary participation rates to the national average by the end of 1995. The analysis which follows treats the Fraser Valley as a discrete region and attempts to establish the levels of enrolment growth needed to meet the government's participation rate target. Enrolment "demand" is compared with the "supply" of institutional capacity and the resulting supply/demand shortfalls are identified. The statistical detail supporting these calculations is provided in Appendix VI.

Predictions about the region's future institutional capacity are based on plans appearing in the profiles prepared by the three Fraser Valley Colleges and Simon Fraser University. Student migration out of the region also is taken into account. Above all else, it is important to emphasize that predictions regarding the aggregate increase in regional "supply" should be viewed as a "best case" scenario; it is highly improbable that the region's institutional capacity targets can be attained within the time horizons outlined. The supply/demand shortfalls will therefore be considerably greater than the following numbers suggest.

6.2 Methodology Overview

The results are illustrative rather than precise and are based on the following technical considerations:

1. Enrolment capacity of a post-secondary institution is reached by dividing the total number of full-time equivalent students (FTE) it serves by 1000 population. Participation rates for a region are determined by dividing the total number of FTE students enrolled in post-secondary education from that region by 1000 population.

2. A full-time equivalent (FTE) undergraduate student is measured by taking the total credit hours delivered to all students in a given program throughout the year and dividing by the number of credits required for a full-time load, generally 30 credits per year.

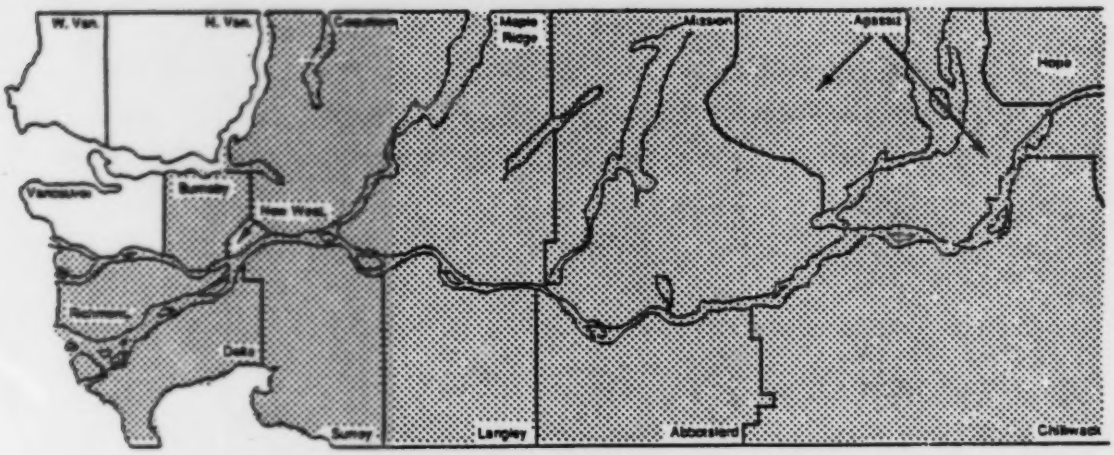
3. Population projections are based on the March 31, 1989 report of the Central Statistics Bureau.

4. It is assumed that increased enrolments will correspond with changes in both population distribution and participation rates and that the collective expression of these two indices will allow reasonable predictions to be made about increasing enrolment demand.

5. Regional participation rates for the Fraser Valley take into account the migration of post-secondary students out of the region to institutions other than the three Fraser Valley Colleges and Simon Fraser University. This "leakage" factor is calculated by reviewing data on the source of student enrolments at all Lower Mainland post-secondary institutions: preliminary information in the B.C. Post-Secondary Link File and the Ministry's report, *B.C. Post-Secondary Enrolment Statistics for 1988/89*. The net outflow of students in 1989 is determined by subtracting the Fraser Valley region's total production of post-secondary FTEs from the total enrolment capacity in the region's post-secondary institutions. In 1994 and 1999, the net outflow is assumed to be similar to 1989 but with allowances for increased migration from high growth communities south of the Fraser River.

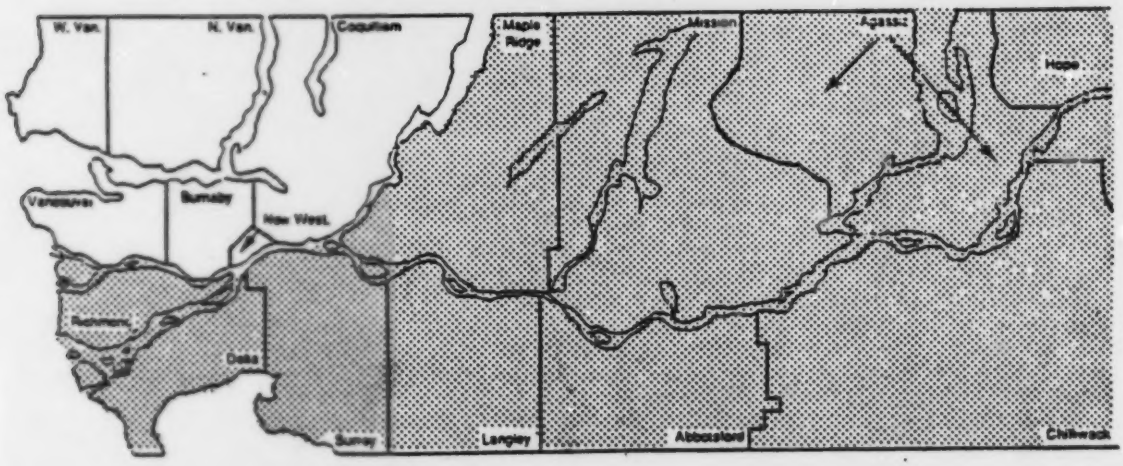
6. For comparative purposes, two geographic models are used. The "Comprehensive Model" encompasses all of the School Districts served by the three Colleges. Its calculations include all post-secondary students produced in all School Districts, the total population contained within the three College regions, and all FTE enrolments at Fraser Valley College, Kwantlen College, Douglas College, Simon Fraser University, and BCIT.

GEOGRAPHIC BOUNDARIES: COMPREHENSIVE MODEL



The "Exclusive Model" treats the Fraser Valley region as a geographic "island" containing only those School Districts south of the Fraser River and east of the Pitt River. The urban communities of Burnaby, New Westminster and Coquitlam are excluded when calculating population, participation and institutional capacity. Similarly, only that portion of Simon Fraser's and Douglas College's enrolments that is delivered within the geographic boundaries of the Fraser Valley is taken into consideration and BCIT is dropped from the analysis.

GEOGRAPHIC BOUNDARIES: EXCLUSIVE MODEL



7. The current provincial and national participation rates are used for all planning periods covered in the analysis and no attempt has been made to predict how these rates might alter over time. Recognizing that it it will be impossible to raise the Fraser Valley's participation rates to the national average by 1995, the targets set for the end of the first five-year planning cycle are calculated as the average between the existing Fraser Valley rates and the current national rates.

POST-SECONDARY PARTICIPATION RATES

(FTE per 1000)

					EXCLUSIVE MODEL	
	Provincial Academic	Provincial All Post-Secondary Programs	National Academic	National All Post-Secondary Programs	Fraser Valley Academic	Fraser Valley All Post-Secondary Programs
1989	21	34.6	24.4	44.7	11.6	18.4
1994	21	34.6	24.4	44.7	18.0	31.5
1999	21	34.6	24.4	44.7	24.4	44.7

6.3 Findings Based on the Comprehensive Model: All Post-Secondary Programs

When the Fraser Valley region is taken to include all School Districts served by Fraser Valley College, Kwantlen College and Douglas College, the area's 1989 participation rate for all post-secondary programs stands at 29 FTE/1000. Approximately 30,000 full-time equivalent students from the region are now studying in post-secondary programs across the Lower Mainland with regional institutions providing services to almost 31,000 FTE. The difference in these two figures is easily accounted for by net student migration into the area, especially to Simon Fraser University and BCIT whose service areas are provincial, national and international rather than regional.

The fact that a portion of the Douglas College region is made up of urban communities with good access to other Lower Mainland post-

secondary institutions tends to move the participation rates upwards dramatically. In addition, it should be expected that participation rates in urban communities will exceed participation rate averages that are based on a mix of rural and urban populations. Moreover, the enrolment predictions over the next decade in Douglas College's institutional plan take into account population growth and student migration from high growth communities south of the Fraser River.

COMPREHENSIVE MODEL
All Post-Secondary Enrolments

Year	Population	Regional Participation Rate (per 1000 population)	Total Regional FTE	Total Institutional Capacity	Estimated Student In-Migration	Surplus of Institutional Capacity over Regional FTE
1989	1,053,000	28.6	30,155	30,815	660	—
1994	1,190,000	36.7	43,630	46,075	660	1785
1999	1,302,000	44.7	58,203	60,787	660	1924

With the regional population expected to grow by 13% between 1989 and 1994, access demand will increase significantly and regional enrolment capacity, based on the projections presented in the institutional profiles, will exceed supply by 1800 FTE. Using the national participation rate target in the calculation for 1994, however, student access demand would exceed institutional capacity by 7,000 FTE. These figures assume that no growth will occur at BCIT but do not discount enrolment growth at Simon Fraser fuelled by out-of-region students.

As the region's population climbs to over 1,300,000 by 1999 and participation rates reach the national average, 58,000 FTE will be seeking access to post-secondary services. Based on this projection, the combined capacity of the region's post-secondary institutions will continue to exceed demand slightly.

6.4 Findings Based on the Exclusive Model: All Post-Secondary Programs

The projections arising from the Comprehensive Model change radically when the Fraser Valley region is more appropriately defined as a geographic "island" consisting of the school districts served by Fraser Valley and Kwantlen Colleges with only the Maple Ridge School District included from the Douglas College region. Viewed from the perspective of the "Exclusive Model", approximately 13,000 FTE are enrolled in post-secondary education out of a total population of 728,000.

The participation rate now stands at 18 FTE/1000 and the institutional capacity within the region is a modest 8 FTE/1000. It is estimated that 7,500 students leave the region in search of post-secondary services elsewhere in the Lower Mainland and this figure is expected to grow only slightly as access opportunities diminish outside the region and as the transportation problem becomes more severe. If the national participation rate were applied to the current enrolment picture in the Fraser Valley, the region would be underserved by 19,000 FTE.

EXCLUSIVE MODEL
All Post-Secondary Enrolments

Year	Population	Regional Participation Rate (per 1000 population)	Total Regional FTE	Total Institutional Capacity	Estimated Student Out-Migration from Region	Shortfall of Institutional Capacity over Regional FTE
1989	728,000	18.4	13.365	5,870	7,495	—
1994	835,000	31.5	26,320	15,440	8,670	2,210
1999	927,000	44.7	41,429	27,590	8,920	4,919

In 1994, the region's population will have grown by 15 percent or 107,000 people. The regional participation rate is expected to increase from 18 FTE/1000 to 32 FTE/1000 — the midpoint between the current regional rate and the current national average. If this target is reached, 26,000 FTE will

result. Institutional capacity, based on the plans prepared by the region's three Colleges and Simon Fraser University, will accommodate 15,000 FTE from this total. Assuming that out-migration to Lower Mainland institutions north of the river is held close to the 1989 "leakage" figures, the region will experience a 1994 enrolment shortfall of approximately 2000 FTE. When regional participation rates at the end of the decade rise to the national average and the population grows by 13 percent over the 1994 base, approximately 41,000 FTE will be seeking access to post-secondary services. Taking the best case scenarios for growth presented in the institutional plans, the enrolment shortfall in 1999 will total 5000 FTE.

6.5 Findings Based on the Exclusive Model: Academic Programs Only

Applying the same analysis exclusively to academic enrolments over the same ten-year period, the findings are equally dramatic. The region now produces 8,500 academic FTE and absorbs only 26 percent in regional institutions. Approximately 6,200 students now leave the region to acquire higher educational services. If the regional participation rate rises to 18 FTE/1000 by 1994, 15,000 academic FTE will be produced and institutional capacity cannot possibly rise fast enough to absorb the increased demand. After accounting for migration out of the region, a shortfall of approximately 900 academic FTE will remain in 1994.

Assuming that the national participation rate for academic FTE can be reached in 1999, and further assuming that the "best case" predictions about improved institutional capacity in the region are fulfilled, the academic FTE shortfall will still exceed 600 FTE a decade from now.

EXCLUSIVE MODEL
Academic Enrolments

Year	Population	Regional Participation Rate (per 1000 population)	Total Regional FTE	Total Institutional Capacity	Estimated Student Out-Migration from Region	Shortfall of Institutional Capacity over Regional FTE
1989	728,000	11.6	8,456	2,200	6,256	—
1994	835,000	18.0	15,033	6,810	7,326	897
1999	927,000	24.4	22,615	14,500	7,476	639

7. ACCESS STRATEGY

The Fraser Valley Access Committee determined that the supply of institutional capacity in the Fraser Valley is inadequate to satisfy the growing demand for post-secondary access. Moreover, the gap between demand and supply will continue to widen as population increases and access opportunities outside the region decline. In the Committee's view, the situation will approach crisis proportions over the coming decade if immediate steps are not taken to prepare a comprehensive development plan and to make development resources available.

Once government sets planning parameters and gives approval to proceed, a fully-refined access strategy for the Fraser Valley can be produced, its efficacy can be judged, and its cost can be calculated. In the absence of a detailed strategic plan, the value of the Committee's work arises from the information it has gathered concerning the region's access needs and from the agreement reached by the Colleges and the University about how the problem should be addressed.

The government of British Columbia's "Access for All" strategy recognizes the desirability of improving access to post-secondary education province-wide and, by setting enrolment targets for the system, encourages expansion of institutional capacity. Within these targets, a commitment has been made to fund the full cost of FTE growth. The provincial strategy also establishes that British Columbia will aspire to the national participation rate by 1995.

Given the dimensions of the problem, the Fraser Valley Access Committee recommends a two phase approach, with the second phase dependent on successful implementation of the first. During the period 1989-1994, the most suitable short-term response involves three elements. The first is to begin by adding capacity at existing institutions. Complementing this activity, planning should commence at once for the creation of additional capacity in a new degree-granting institution. And third, initiatives for cooperation should be set in motion to promote better program articulation, facilitate student transfer, stimulate extension program development and deliver a

public information campaign promoting the benefits of higher education and seeking community response.

Development plans for the 1995-1999 planning period will be contingent on the extent to which institutional capacity has been increased in regional institutions and on the existence of a new degree-granting presence in the region.

7.1 Building New Institutional Capacity

The fastest and most cost-effective means of increasing post-secondary opportunities in the Fraser Valley is to expand services within those institutions already given responsibility for the region's access needs. Fraser Valley College, Kwantlen College, Douglas College and Simon Fraser University have each prepared a needs assessment based on demand projections within their respective constituencies. These projections appear in the institutional profiles appended to this report.

Regional needs justify the assumptions contained in the profiles, but the growth projections for individual institutions require refinement. As experienced academic planners, the Committee members realize that new programs cannot be implemented overnight — the development of institutional capacity can be accelerated, but there are limits to the speed at which growth can occur.

7.2 A New Degree-Granting Institution

One option for solving the region's access shortfall would rely exclusively on growth at the community college level. Its weakness is Simon Fraser University's current inability to absorb the increased number of academic students who would then seek to complete degrees at the Burnaby Mountain Campus. Not only would the University's institutional capacity have to expand even more dramatically than now anticipated, concerns over transportation would first have to be resolved. Furthermore, the colleges would have to dedicate a disproportionate amount of their services to

academic programming with the result that their educational mission would radically change.

Although Simon Fraser's Burnaby Mountain Campus must grow substantially as part of its contribution to improved Fraser Valley access, expansion cannot occur fast enough to absorb the full force of enrolment growth forecast for the 1990s. **A new degree-granting institution for the region offers a reasonable alternative. Site identification, land acquisition, construction and academic planning should commence immediately** if students are to be accepted into the new institution by September, 1995. **The Senate at Simon Fraser has stated its willingness for the University to lead the planning exercise.** Consultation with government, the colleges and local communities, and within the University, will determine whether Simon Fraser acts as facilitator in the development of an autonomous institution or whether the new institution should evolve as an SFU campus in the Fraser Valley.

7.3 Program Articulation and Student Transfer

Increasing the efficiency of the existing regional system also can improve access. Greater college-to-college and university-to-college program articulation is essential. **The Fraser Valley Access Committee should therefore make it a high priority to establish and maintain inter-institutional planning relationships.**

At the college level, a number of joint activities already provide models for further expansion. In the credit area, for example, Fraser Valley College and Douglas College cooperate in the Fort Langley Archaeology Field School. Douglas and Kwantlen Colleges jointly deliver a non-credit program in Floristry Design. Simon Fraser University's School of Criminology has a long-standing relationship with Fraser Valley College and SFU's Department of Communication has recently concluded an agreement to receive qualified Fraser Valley College students into its upper-division program. The University's Faculty of Science is now developing an innovative arrangement with all of the region's colleges: parties to the agreement have identified requirements for an Associate in Science Diploma program that will enable

academically qualified college diploma recipients to transfer directly into upper-division degree completion studies in the Faculty of Science.

7.4 Extension Services

The extension model offers an ideal, *short-term* response to the region's access needs. **The University's extension service should increase the number of upper-division credit courses it delivers in the Fraser Valley.** In consultation with the Colleges, **first and second year academic programs also should be made available in disciplines not presently offered in the Colleges' educational portfolios.**

In these initiatives, inter-institutional cooperation will be essential. **Financial assistance from the Ministry will be required to establish an SFU Extension Centre in the region.** Supported by credit courses offered through the University's Distance Education Program, the extension service will strengthen other components of the regional access strategy over the first five years of its implementation. When a new degree-granting institution opens its doors, responsibility for the extension service will be transferred and the SFU Extension Centre will be closed.

7.5 Public Information

Changing public attitudes about the benefits of higher education will boost post-secondary participation in the Fraser Valley. As institutional capacity in the Colleges expands and Simon Fraser University's presence in the region becomes more visible, the improved supply of educational opportunities will attract a new educational clientele. **A public information campaign should be designed to encourage further participation and provide information to local communities about the opportunities of higher education.** Aided by the Ministry of Advanced Education, Training and Technology, the three Valley Colleges and Simon Fraser should take responsibility for the information initiative. The campaign should take direction from local community organizations and from the government's response to the *Fraser Valley Access Committee Report*.

7.6 Concluding Comment

Through the coordinated effort of all concerned, there is cause for optimism. The Fraser Valley Access Committee has succeeded in defining the access problem and has outlined a proposed course of action. Sufficient time remains for detailed institutional and curriculum planning to take place. If prompt action is taken and the necessary resources are secured, the full benefits of post-secondary education will be accessible to the people of the region a decade from now.

8. RECOMMENDATIONS

1. That the participation rates for post-secondary education in the Fraser Valley be raised to at least the national average by the end of the next decade, in keeping with provincial government policy.

2. That the region's post-secondary institutions be provided sufficient capital and operating resources to allow them to play a major role in meeting the provincial government's participation rate target.

3. That first priority in an access strategy for the Fraser Valley be given to expanding institutional capacity at Fraser Valley College, Kwantlen College, Douglas College and Simon Fraser University.

4. That second priority be given to the planning and development of a new degree-granting institution for the region:

    - that the new institution be given an inaugural deadline of September, 1995;
    - that it be located to provide optimum commuter access for the majority of Fraser Valley residents;
    - that it offer undergraduate and graduate instruction to no less than 3,900 undergraduate and 420 graduate FTE by 1999; and
    - that Simon Fraser, in keeping with the decision of the University's Senate, is prepared to lead the planning exercise.

5. That first- and second-year university transfer programs and existing non-university programs be expanded in Fraser Valley community colleges and that new career/technical and vocational programs be established in response to local community needs and access demand.

6. That greater program articulation and ease of student transfer between colleges and universities be instituted.

7. That Simon Fraser University establish a physical presence in the region from which an expanded extension program can be mounted:

    - that the extension program concentrate on delivering upper division university courses;
    - that the extension program provide access to at least 260 FTE students by 1994/95; and
    - that colleges in the Fraser Valley assist by making classroom space available, wherever possible.

8. That a public information campaign be developed by the institutions represented on the Fraser Valley Access Committee to communicate about post-secondary education opportunities and to seek community views on the direction of post-secondary development in the region.

9. That the Fraser Valley Access Committee be continued to ensure that post-secondary opportunities in the Fraser Valley are coordinated and that access to post-secondary services is effectively and efficiently extended to the people of the region.

APPENDIX I

I. THE APPROPRIATENESS OF THE UNIVERSITY-COLLEGE MODEL FOR THE LOWER FRASER VALLEY

Prepared for the Fraser Valley Access Committee by Dr. Peter Jones, President, Fraser Valley College

1) Preface

In thinking about the University-College model as a potential solution to access issues in the Lower Fraser Valley, it is easy to focus on the pragmatics of cost-effectiveness and other practical — and important — considerations.

It is more difficult, especially in our rush to meet the target of achieving participation rates equivalent to the national average, to stand back and consider the philosophical and educational arguments for and against the university-college model.

We believe, however, that these latter considerations are the important ones.

The key question is whether the missions and mandates of the two kinds of post-secondary institutions known as "universities" and "colleges" are compatible. Can goals and objectives of these hitherto distinct kinds of institutions best be accomplished under one roof when other options are available?

It is not our role to comment on the appropriateness of the university-college model for other parts of the province. However, it is our belief that in the Lower Fraser Valley, with the presence and involvement of Simon Fraser University in close cooperation with the colleges, a different model may prove to be more effective in providing better access to degree programs while at the same time maintaining the integrity of the two different kinds of institutions.

2) Some Comments

Research and Scholarship: One feature that distinguishes universities from colleges is the emphasis of the former on research and scholarship. Universities are a major source of basic research and of a great deal of applied research in this country. It is this emphasis that provides an important element in the university experience of its students.

National, International and Regional Perspectives: A second distinguishing characteristic of worthwhile universities is that they are national and even international institutions. This is both because of the breadth and depth of their curricula and faculties and also because of an earned reputation for research and scholarship.

Colleges, on the other hand, have a well-articulated and important mandate to provide a broad range of educational services to the adults of specific regions and communities in British Columbia. This is accomplished through a local policy-making structure and through an ability to respond quickly and flexibly to community educational needs.

Balance between Academic and Career/Technical Programs: Each College has attained and maintained its own sometimes fragile balance among the various elements of its mandate. University transfer programs exist side-by-side with programs leading directly to the job market and other programs designed to upgrade in a general way the students' basic educational qualifications.

Granted the nature of the post-secondary educational hierarchy, there exists a significant danger in the university-college model of creating an imbalance — or at least a perception of imbalance — between degree programs and non-university related programs such as ABE, vocational training and career/technical diplomas.

Traditional Community Responsiveness of Colleges: Colleges have traditionally been more able than universities to respond quickly and flexibly to community needs. Universities, on the other hand, usually have rather

ponderous decision-making processes. As university-colleges become increasingly preoccupied with degree programs, there is a danger that they may lose this very important responsiveness to community needs.

Resources: In keeping with its mandate for research and scholarship at a national and international level, a true university regards as essential significant financial investments in its human resources (faculty) and its learning resources (library). It is difficult to see how university-colleges can ever realistically aspire to the very expensive acquisition of book and document collections and of internationally recognized faculty that should typify a university. The province cannot be expected to provide the level of funding necessary for these resources in more than three or four different institutions in the province, namely the existing universities.

3) Conclusion

The respective roles of colleges and universities are complementary but, at least in the Lower Fraser Valley, are best not combined.

Owing to the proximity of Simon Fraser University, opportunities exist in this region that may not have been feasible in other more remote locations.

APPENDIX II

II. PROFILE — FRASER VALLEY COLLEGE

1) Environmental Scan 1989-1994

The area served by Fraser Valley College is made up of the Abbotsford, Mission, Agassiz, Chilliwack and Hope School Districts and has a combined population estimated at 166,000. Growth of 15 percent is predicted over the next five years, bringing the new total to 191,000 by 1994. The lion's share of the anticipated increase will occur in the western sector of the region.

Percentage growth in secondary school enrolments is outperforming growth in the population-at-large and substantially exceeds Ministry of Education projections. Grade XII enrolments in 1990 will be 15 percent higher than the previous school year; with significant levels of in-migration expected to continue for 1991, the rise in Grade XII admissions will approach 20 percent that year.

These figures take on particular importance when transition rates from high school to post-secondary education are considered. In 1988 the Fraser Valley College region sent only 42 percent of its graduating Grade XII students to higher education compared to 70 percent in Vancouver. Among those Fraser Valley graduates who did go on to higher education, 75 percent of them entered the College's programs. Fraser Valley College also captures 79 percent of the total post-secondary enrolments and 65 percent of all academic post-secondary enrolments originating within its region. These remarkable regional retention rates are unmatched by any other post-secondary institution in the Lower Mainland or Fraser Valley.

2) Program Profile 1989-1994

The low rate at which post-secondary students are "exported" from the region, combined with escalating Grade XII enrolments, exponential population growth, and policy-inspired participation rate increases, will produce a trend toward greater participation in the College's programs. In-migration of a

relatively cosmopolitan population with an appreciation for the benefits of academic attainment will especially influence university and university transfer program enrolments.

Driven by these factors, the program mix at Fraser Valley College will shift in favour of academic studies and the academic stream's current 35 percent share of the College's total enrolment is predicted to rise to 40 percent by 1994. Accompanying this change in program emphasis, career/technical programs will increase by 2 percent of total enrolments, vocational programs will decline by 4 percent and adult basic education will drop from its present 15 percent share to 12 percent. It should be added that the predicted decrease in demand for adult basic education will be offset by higher enrolments in English Language Training (ELT) programs.

3) Enrolment Capacity 1989-1994

The best estimate of the Fraser Valley College region's overall post-secondary enrolment is 2,530 full-time equivalent students or 15.2 FTE/1000 population. On the basis of funded FTE, the College's capacity to provide post-secondary services is currently 11.56 FTE/1000. When these figures are compared to the provincial average (estimated by the College's planners at 33.3 FTE/1000), it is abundantly clear that the region is seriously underserved — overall post-secondary participation in the region must increase dramatically if the provincial government's participation rate objective is to be reached by 1994. Viewed from another perspective, if Fraser Valley College maintains its historic 65 percent share of all academic enrolments generated in the region, and if a participation rate of 33.3 FTE/1000 is applied, the College's academic programs will have to grow by over 180 percent in five years to satisfy the population-driven access demand. Across all program streams, an equally impressive 161 percent rise in FTE will be required.

4) Facilities 1989-1994

Fraser Valley College's facilities now total 22,520 square metres with 33 percent in Chilliwack, 62 percent in Abbotsford, and 5 percent distributed between leased accommodation in Mission and Hope. Major physical plant

expansion must be undertaken at all College facilities to provide space for the 5020 FTE expected to be enrolled in the 1994/95 academic year. The single largest capital program, capable of accommodating 2800 new FTE, will be needed at the Abbotsford Campus in the region's highest growth area.

5) Environmental Scan 1995-1999

The population of the Fraser Valley College region will reach over 214,000 by the end of the century. This represents a 12 percent increase over the 1994 estimate and a 29 percent increase over the population 10 years earlier. Growth will concentrate in the region's western sector as it did during the first five-year planning period. Population projections by sector for the year 1999 and data on their respective age cohorts are presented in the table below.

PROJECTED POPULATION
FRASER VALLEY COLLEGE REGION
1999

Population	East	West	Total
Total	70,368	143,890	214,258
Over 15 yr.	56,604	114,521	171,125
15-24 yr.	9,352	17,666	27,018
15-19 yr.	4,971	9,255	14,226

6) Program Profile 1995-1999

Given the many variables that could affect predictions about program mix by the turn of the century, the profiles offered in the following table are tentative. Nevertheless, it is safe to assume an increased demand and a higher first-to-second year retention rate for university and university transfer programs.

FRASER VALLEY COLLEGE PROGRAM PROFILE, USING PROVINCIAL AND NATIONAL ACCESS STANDARDS, 1999

Program	FTE @ 33.3/1,000	FTE @ 40/1,000	Percent
ABE/ELT	700	839	12.4
Career/Technical	1,727	2,072	30.6
Academic	2,310	2,776	41.0
Trades/Vocational	900	1,083	16.0
	5,637	6,770	100.0

7) Enrolment Capacity 1995-1999

The College has adopted a policy "to achieve for the residents of the Fraser Valley College region by 1994 a level of access to post-secondary education equal to the provincial standard for all British Columbians and, by 1999, a level . . . equal to the national standard for all Canadians." In setting these targets, the College recognizes that they fall short of the province's expressed desire to raise participation rates to the national average over the next five years. By substituting the provincial for the national average as a five-year target, Fraser Valley College is pursuing a realistic yet challenging goal.

If the College's calculation of the current provincial participation rate (33.3 FTE/1000) is reached in the five-year period leading up to 1999, and if the College maintains its historic percentage of all post-secondary enrolments in the region, a decade from now the College will need to provide access for 5,637 FTE. If the national participation rate, conservatively estimated by the College at 40 FTE/1000, is applied to the population predicted for Fraser Valley College's catchment area in 1999, 8,570 FTE would result. Assuming that current regional retention rates will hold, Fraser Valley College would be expected to absorb 6,770 FTE out of this total. This projection represents a total increase over ten years of 253 percent.

8) Facilities 1995-1999

Facilities planning for the 1995-1999 period will be influenced by the participation rate target that is set for Fraser Valley College. If the national access level of 40 FTE/1000 is achieved, the College must provide space for 6,770 FTE. Assuming a "midsize" college net assignable space/FTE ratio of 7.9 square metres, 30,980 square metres of new physical plant will have to be added to the 1989 space inventory. If the provincial average of 33.3 FTE/1000 is adopted, the space shortfall between the current inventory and the projected 1999 space requirement will be 21,980 net assignable square metres.

9) Fraser Valley College into the 21st Century

The population of the Fraser Valley College region will approach 300,000 in the first decade of the new century. Significant demographic changes, accompanied by new industrial opportunities and greater urbanization, will combine to alter community profiles radically. Without hazarding a guess about specific effects, there is no doubt that Fraser Valley College will have to grow and adapt to new pressures and new circumstances.

APPENDIX III

III. PROFILE — KWANTLEN COLLEGE

1) Environmental Scan 1989-1994

Kwantlen College serves the school districts of Richmond, Delta, Surrey and Langley which together are experiencing the province's most rapid population growth. Over the five years between 1989 and 1994, the number of people residing in the area will increase by 13%, adding 68,000 to the current population base of 507,000. The greatest growth will occur in Surrey.

Over the same period, a general shift in age distribution is anticipated throughout the Kwantlen region. For example, the 25-34 year old age cohort will begin to decline as a percentage of total population. The 35 years and over cohort will witness a steady increase to over 50 percent of total population in five years.

Kwantlen College enrolled 28 percent of all 1988 high school graduates from its region who went on to post-secondary education. Grade XII will continue to be an important source of Kwantlen's student intake and growth in the number of Grade XII graduates in the Kwantlen region will be the greatest in the province, more than double that of any other region.

Along with the prediction that a greater number of students will make the transition from secondary to post-secondary education, the area's changing demography suggests there will be a heightened demand for English as a Second Language (ESL) and basic skills training over the next half decade. A new industrial base is emerging as a complement to the flourishing marine, horticultural and equine businesses in the Kwantlen region and the need for skilled employees will continue to be intense.

2) Program Profile 1989-1994

At the end of the first five-year planning cycle, it is estimated that 45 percent of Kwantlen College's enrolment will be in academic programs, 25

percent in career/technical, 20 percent in vocational instruction, and the remaining 10 percent in adult basic education. Based on this prediction, academic programs will increase their present share of the College's total enrolment by 8 percent while career/technical and vocational instruction will decrease by 6 percent and 2 percent respectively. Assuming that Kwantlen's facilities plan will be implemented according to the proposed schedule, the College's distribution of full-time equivalent students (FTE) will be 30 percent in Richmond, 20 percent in Langley, with the remaining half located in Surrey.

3) Enrolment Capacity 1989-1994

Using the number of full-time equivalent students divided by 1000 population as a measurement of enrolment capacity, Kwantlen College now takes in 7.2 FTE/1000. The College administration intends to make a major contribution to the government's access strategy by significantly raising its enrolment capacity by the 1994/95 academic year. The increase that Kwantlen's planners foresee translates into 16.8 FTE/1000 and would move FTE enrolments from their present base of 3690 students to 9660 — a 162 percent gain over five years.

4) Facilities 1989-1994

The College is entering the coming decade with no major permanent facilities. However, in September 1990, Kwantlen will occupy a new permanent Surrey Campus with a capacity to house 2000 FTE. This Phase I Surrey Campus will accommodate programs from Kwantlen's 140th Street site while the majority of career/technical and vocational programs now located at the 77th Avenue facility in Surrey will remain in place.

A permanent campus for Richmond with a capacity of 2400 FTE is in the planning stage. Construction is slated to begin in 1990 with occupancy expected in 1992. In addition, if planning approval is given in 1990, a 1500 FTE Langley Campus will be occupied by 1993.

Enrolment pressure lends urgency to the planning and construction of Phase II at the Surrey Campus to provide space for an additional 1700 FTE. The anticipated move of vocational and career programs from the Newton Campus to the Phase II Surrey Campus may have to be reconsidered if enrolment pressure on academic and career programs forces them to be displaced in the Phase II expansion. If this decision becomes necessary, the future of the Newton Campus and its program configuration could be called into question.

KWANTLEN COLLEGE FACILITIES PLAN
1989/90 - 1993/94

Location	Date	FTE Capacity	Square Feet	Occupancy Date
PLANNING				
Surrey	1987/88	2000	175,000	
Richmond	1989/90	2400	250,000	
Langley	1990/91	1500	165,000	
Surrey (2)	1991/92	1700	280,000	
		7600		
CONSTRUCTION				
Surrey (approved)	1988/89	2000	175,000	September 1990
Richmond	1991/92	2400	250,000	September 1992
Langley	1991/92	1500	165,000	September 1992
Surrey (2)	1992/93	1700	280,000	September 1993
		7600		

KWANTLEN COLLEGE FACILITIES AVAILABLE
1993

Location	FTE Capacity	Square Feet
Surrey	2000	175,000
Richmond	2400	250,000
Langley	1500	165,000
Surrey (2)	1700	280,000
Newton	1061	170,000
	8661	1,040,000

5) Environmental Scan 1995-1999

The population of the Kwantlen College region is estimated to reach 644,000 by the year 1999. This projection anticipates a 12 percent projected increase over the 1994 population base.

The 18 and over age cohort will rise from an estimated 440,000 at the beginning of the five-year planning period to over 485,000 by the year 2000. Between 1989 and 1999, Grade XII enrolments will increase by 23 percent in the Kwantlen region as a whole and by 46 percent in Surrey alone. The proportion of 25-34 year olds will continue to decline from 15 percent of total population in 1994 to 13 percent in 1999. At the same time, the 35 and over cohort will rise from just over 50 percent to 55 percent. Population growth in Langley and Surrey will remain fast-paced and will provide the principal catalyst for Kwantlen's expanded services.

6) Program Profile 1995-1999

The College's planners predict that the program mix established in 1994/95 will remain relatively constant to the end of the century although the proportion of total enrolment given to academic programs could shift if a new degree-granting institution is constructed in the Fraser Valley.

7) Enrolment Capacity 1995-1999

Kwantlen has set the objective of capturing a significantly larger share of the post-secondary student population in its region. In the belief that its enrolment capacity should reach 75 percent of the current provincial average (estimated by the College's planners at 33.3 FTE/1000) by 1999, the College expects to build on the 1994/95 target of 16.8 FTE/1000 and raise its enrolment capacity to approximately 25 FTE/1000 by the end of the planning cycle. With the compounding effect of population growth, an enrolment capacity projected at this level for 1999 would require an intake of 16,000 FTE — a 334 percent increase over 1989 enrolment figures.

8) Facilities 1995-1999

Assuming full implementation of the previous planning cycle's capital plan, consolidation rather than vigorous expansion will become the watchword for the 1995-1999 development cycle. Particular attention will be directed to the Newton Campus. Additional facilities will be needed at that site if vocational programs continue to be delivered alongside academic and career programs.

The Surrey Campus, even with Phase II completed, will reach full utilization by the end of the century and forward planning should be underway to take Kwantlen beyond the year 2000. The Richmond Campus will continue to serve South Delta but population growth will create pressure for new facilities in both Delta and southern Surrey. As well, new space for vocational instruction will be required in Langley.

9) Kwantlen College into the 21st Century

Total population in the Kwantlen College region could easily reach three quarters of a million people in the first decade of the 21st century. Surrey's growth rate will likely be double the rate of Richmond and Delta while Langley's is expected to be twice again that of Surrey. The centre of population density will continue to move eastward up the Fraser Valley and the communities of the region will change accordingly. As transition rates from high school to higher education improve and the evolution from rural to urban lifestyle accelerates, the demand for post-secondary services will undoubtedly remain strong.

APPENDIX IV

IV. PROFILE — DOUGLAS COLLEGE

1) Environmental Scan 1989-1999

Douglas College serves the School Districts of Burnaby, New Westminster, Coquitlam and Maple Ridge/Pitt Meadows. From a 1989 population base of 379,000, the region is expected to grow by 11 percent over the next five years. The increase will be led by the communities of Coquitlam and Maple Ridge.

The College's catchment area comprises mostly suburban communities but population density decreases to the east where large tracts of rural land are still in evidence throughout Maple Ridge and Pitt Meadows. Family incomes vary by community with Burnaby and Coquitlam slightly above the the British Columbia average, Maple Ridge very nearly on the average and New Westminster falling below. The median age also varies from community to community but is generally rising in step with the province-wide aging trend.

Historically, the Douglas region has resembled the rest of the province with approximately 20 percent of its residents speaking English as a second language. Growing in-migration by new residents whose countries of origin are Asian rather than European is changing the region's traditional ethnic mix.

2) Program Profile 1989-1994

Student demand across all program streams at Douglas College will remain strong over the next five years. Even though most residents of Burnaby and New Westminster have access to other Lower Mainland post-secondary institutions, 35 percent of the local high school graduates who went on to higher education in 1988 chose to enrol at Douglas College. This share is expected to increase as new campus facilities and additional program opportunities come on stream.

Student participation in the College's academic programs currently accounts for 38 percent of the College's 4340 FTE enrolment. While demand for academic programs will continue to be high in 1994, academic enrolments will be permitted to increase only marginally as a proportion of the College's total number of full-time equivalent students. Adult basic education, especially in the area of English Language Training, also will experience a modest increase. The representation of career/technical programs in the College's educational portfolio will decline slightly over the same period, despite an increase of 1000 FTE. Vocational programs, previously constrained by a lack of facilities, will absorb proportionately higher enrolments, raising their share to 17 percent of the total FTE.

3) Enrolment Capacity 1989-1994

Rapid enrolment growth is expected over the next three to seven years as the population surge moves through the Douglas College region. At present, the College has a capacity of 11 FTE/1000 population and anticipates increasing to 18 FTE/1000 by the end of the first five-year planning phase. This goal can be be reached by adding 3300 FTE over the next five years, for an overall increase of 76 percent above the College's 1989 enrolment base.

In step with the public policy initiative to improve participation rates province-wide, the proposed expansion in institutional capacity at Douglas College will help satisfy the growing demand for educational access that will accompany population growth. Increased institutional capacity also will present opportunities for Douglas College to balance its program profile by providing improved access to technical and vocational instruction. On a program-by-program basis, FTE enrolments in adult basic education will increase by 78 percent, career/technical programs by 57 percent, academic programs by 82 percent, and vocational training by 113 percent.

One factor that inhibits access is the region's inadequate transportation system. The New Westminster Royal Avenue Campus benefits from a location close to SkyTrain and other transit services but similar advantages are absent elsewhere in the region, especially in the "Northeast Sector" where transportation services have been judged by the Greater Vancouver Regional

District to be in a state of crisis. On a more positive note, the proposed campus for the Westwood Plateau/Town Centre area of Coquitlam and the Thomas Haney facility in Maple Ridge offer prospects for significantly improved transportation access.

4) Facilities 1989-1994

Douglas College is now operating at capacity and a major capital investment in facilities development will be necessary during the 1989-1994 planning period. Renovations are underway at the Royal Avenue Campus in New Westminster that will permit the campus to raise its enrolment to 4600 FTE. Another 500 FTE will be located at the Thomas Haney Centre in Maple Ridge when it is completed. Negotiations are in progress for the acquisition of a 25 acre campus site in Coquitlam that will serve 2500 FTE by 1994. Temporary lease space will be needed to meet student demand in Coquitlam and to establish Douglas College's presence in the area while the permanent campus is being constructed.

5) Environmental Scan 1995-1999

It is predicted that the rate of population growth in the Douglas College region will begin slowing appreciably in the half decade leading up to the end of the century. In communities such as New Westminster, population will reach a plateau by 1994 and remain relatively stable for the next fifteen years. Across the region as a whole, 24,000 people will be added to the 1994 population base over the next five years for a rise of 5.7 percent.

6) Program Profile 1995-1999

The program mix established at the end of the first five year planning phase will remain virtually unchanged in the year 1999. University transfer programs are expected to account for 39 percent of total FTE enrolments, adult basic education will undergo a slight rise in proportional representation to 10 percent, career/technical instruction will fall off marginally to 34 percent and vocational program enrolments will remain unchanged at 17 percent.

7) Enrolment Capacity 1995-1999

As the pace of population growth begins to abate in the Douglas College region, the decline in enrolment pressure that might otherwise be expected will be offset by increased post-secondary participation rates. Increased participation will come about in two ways: by increasing access opportunities through the construction of new facilities in areas not previously provided with local post-secondary services and by actively supporting the provincial government's "Access for All" strategy.

The College anticipates that its enrolment capacity will reach 23 FTE/1000 population by 1999. Assuming that institutional capacity in 1994 reaches 18 FTE/1000, the College will be required to provide educational services for an additional 2460 full-time equivalent students by the end of the second five-year planning cycle. This increase will be distributed across all program streams with FTE enrolments in adult basic education rising by 70 percent over 1994 levels, career/technical instruction by 27 percent, and academic and vocational programs by 31 percent each.

8) Facilities 1995-1999

It is expected that facilities development during the previous five-year planning phase will position Douglas College to absorb most of the enrolment growth anticipated during the second phase. However, a "storefront" facility capable of serving 500 FTE in Burnaby will be needed by 1996. Expansion onto the fifth and sixth floors of the Royal Avenue Campus will accommodate an additional 500 FTE.

9) Douglas College into the 21st Century

Douglas College hesitates to make predictions past the turn of the century. Nevertheless, a new river crossing linking Maple Ridge to Langley could encourage students in the region's eastern sector to seek educational opportunities outside their home communities. Further deterioration of transportation services in the region's northeast sector could produce the opposite effect and place added pressure on the College's programs. While

precise predictions would be suspect, it is probable that Douglas College will experience steady, incremental growth into the first decade of the twenty-first century.

APPENDIX V

V. PROFILE — SIMON FRASER UNIVERSITY

1) Environmental Scan — General

Institutional planning at Simon Fraser University must be responsive to many different environments and all of them must be taken into account. The first is British Columbia's public post-secondary education system in which SFU is only one participant among many. Another is the context of Simon Fraser's unique past and the influence of its own history. Also important, the University is affected by provincial, national and international trends. Finally, university autonomy and the traditional structures of academic governance create a special environment that must be considered.

The post-secondary system in British Columbia includes two other provincial universities, Trinity Western University, the Open Learning Agency, the provincial institutes and the community colleges. Active cooperation with SFU's sister universities is necessary to ensure the efficient use of public resources. Program articulation with other post-secondary institutions is essential in order to maintain the system's integrity. When the post-secondary system is seen as an environment in its own right, factors such as the annual allocation of capital and operating funds and the desire to avoid unnecessary program duplication combine to help shape Simon Fraser's institutional development.

Simon Fraser shares certain historical features with all universities, especially its dedication to research. But its own unique nature has grown out of its first twenty-five years and the influence of the past on the University's character is very much in evidence. For example, Simon Fraser's long-standing commitment to innovation is demonstrated in its flexible approach to learning. Since its founding in 1965, SFU has operated on a trimester system — a feature that increases accessibility, especially for lifelong learners, mature and part-time students. Regular lectures are complemented by extensive use of small group tutorials. Co-operative study programs combine traditional forms of instruction with work experience gained from job

placements. And recognizing that the world has entered a new era in which the command of high technology and information provides the competitive edge, the University is extending the use of computers for instruction as well as for research and administration.

Community outreach, mid-career upgrading and lifelong learning figure prominently in the University's pedagogy. The SFU Centre for Distance Education delivers over 100 degree-credit courses with more than 7000 course enrolments annually. Continuing Studies at SFU offers credit and non-credit courses and the new Harbour Centre Campus in downtown Vancouver provides excellent access for people working or living in the city core.

The University also has a distinguished record of promoting interdisciplinary studies and interdisciplinary research. Special attention has been given to devising ways of placing research results and technological discoveries in commercial settings. Technical advice and research expertise are made available to the private and public sectors and the University has created services designed to meet the needs of small businesses and entrepreneurs. This contribution to the economic well-being of the community stems in large measure from Simon Fraser's strong commitment to research and graduate instruction.

While past traditions will continue to reflect on institutional planning, Simon Fraser must be responsive to the current social, cultural and economic needs of British Columbia. As the provincial population grows and participation rates improve, enrolment demand at Simon Fraser will continue to be intense. Because Simon Fraser University kept its doors open to academically qualified students throughout the recent period of financial restraint, the University is now suffering a pronounced shortfall in human and physical resources. This shortfall presents substantial obstacles to growth and one that must be remedied before significant expansion can occur: enrolment growth cannot be allowed to overreach the resources needed to sustain educational quality. Access to higher education is of little value unless the quality of the educational experience can be guaranteed. Policy support for the view that enrolment growth must be adequately funded is one reason SFU welcomes the Provincial Government's "Access for All" strategy.

National and international trends play their part in influencing the University's development. Advances in information technology, the increasing pace of social change, the new era of global economic competition, an aging population, and the growing acceptance of lifelong learning all have an impact on higher education. Specialized knowledge must now be placed in a context of other kinds of educational experience including an understanding of the cultural traditions and attitudes held by Canada's trading partners. Students must be assisted to develop the capacity for critical thinking, for innovation and sound judgement as well as vocationally relevant skills. In planning for the future, therefore, the University must carefully consider changes to the national and international environments in which it participates.

Simon Fraser University shares with all research-intensive educational institutions a fundamental mission to discover, transmit and preserve knowledge. This mission depends for its success on the spirit of free inquiry supported by the principle of university autonomy. The University Senate helps protect academic freedom by exercising governing authority over Simon Fraser's scholarly interests and it follows that Senate approval is required before new academic initiatives can be embarked upon.

2) Environmental Scan 1989-1994

Over the next five years, the Provincial Government's "Access for All" strategy will have a crucial influence on institutional planning at Simon Fraser University. As one aspect of the strategy, the Ministry of Advanced Education, Training and Technology identified 1994 enrolment growth targets for the university system. Simon Fraser has been asked to absorb 3700 undergraduate FTE out of a system-wide expansion of 5200 FTE. An additional 1800 FTE at the graduate level will be distributed among the three provincial universities.

The "B.C. Council on Admissions and Transfer" is another outcome of the "Access for All" strategy. The Council, an independent body reporting annually to the Minister, includes representation from students, colleges, provincial institutes, the Open Learning Agency, the universities and the

Ministry. Its purpose is to formulate policies and procedures that will promote system-wide program articulation and integration with particular attention given to the inter-institution transfer of students. The nature of the Council's recommendations and the Ministry's response to them will clearly affect the relationships among post-secondary institutions and could provide direction to the institutional partnerships that are developing in the Fraser Valley.

The Steering Committee on Three Year Planning also was established by the Ministry in 1989. With participation from the Tri-University Presidents' Council, the Council of Principals, the British Columbia Association of Colleges, Treasury Board Staff and the Ministry, the Committee submitted its report in July. The Ministry's Executive Committee has now endorsed the report with only minor amendments and a process has been adopted to move the post-secondary system to a three-year planning cycle. Aside from offering a more stable and predictable funding environment, the new planning approach is intended to promote greater program articulation. The effect on institutional planning at Simon Fraser University is expected to be significant.

The need to consolidate resources at the Burnaby Mountain Campus must be satisfied before the University can absorb further enrolment growth and, where human resources are at issue, the impending crisis over faculty recruitment must be considered. As the professoriate throughout North America is becoming predominantly middle-aged, large numbers of faculty are expected to retire starting in the early 1990s. Competition for the limited supply of replacement faculty will be intense; with competition will come a demand for higher wages and the need to offer employment inducements, particularly in the Greater Vancouver area where housing costs are relatively high. While the faculty renewal problem will be international in scope, SFU cannot afford to underestimate its effect on the University's hiring prospects. If major difficulties are encountered in faculty recruitment, progress toward enrolment growth will be impeded.

Finally, the following motion passed by the University Senate on November 16, 1989 must be considered: "Within the context of a growth and development strategy that places first priority on its existing campuses, Simon

Fraser University should lead in the planning of a new institution of higher learning in the Fraser Valley." While passage of this "enabling" legislation allows SFU to investigate new institutional arrangements in the region, no decision affecting the University's academic program will be made without prior Senate approval.

3) Program Profile 1989-1994

The fortunate coincidence of the Ministry's "Access Strategy", SFU's in-house Fraser Valley Planning Committee Report, and the recommendations brought forward by the Steering Committee on Three Year Planning, has concentrated the efforts of all academic units at the University to refine their growth and development targets. The University's academic planning objectives will be met in two ways: by strengthening the academic programs in which Simon Fraser has already established national acclaim and international prominence, and by adding new programs designed to meet emerging provincial and national needs.

Over the next five years, the Faculty of Science will emphasize teaching and research in its areas of recognized expertise including condensed matter physics, molecular biology and biochemistry, pest management, behavioural ecology, and in the fields of statistics and pure and applied mathematics. The faculty will continue to play a prominent role in TRIUMF and in developmental planning for a KAON factory. New growth areas include a Master's program in Aquaculture and undergraduate and graduate programs in Environmental Science and Toxicology. As these programs are developed, they will reflect Simon Fraser's interdisciplinary tradition by combining the talent of the University's scientific departments with specialized knowledge in other areas of the University. The Faculty will also reach out to the community with increased programming at Harbour Centre, including a Certificate Program in Actuarial Mathematics.

In the Faculty of Applied Sciences, SFU will continue to draw on academic resources in the Centre for Systems Science and the Centre for Policy Research on Science and Technology to bring together computer scientists, physicists, kinesiologists, communication and natural resources

management specialists to pursue strategic initiatives in microelectronics, communications, biomedical research and science policy. With its concentration on biotechnology and biochemical processing, "Core C" of the Engineering Program is under active development. Development efforts also are being directed to a new Centre for Publishing Studies and to expanding the Centre for International Communication. A doctoral program in Engineering and a Master in Publishing are now being assessed in preparation for Senate review. A doctoral program in Resources and Environmental Management is also being planned.

The Faculty of Education will continue to provide teacher training that responds quickly and efficiently to provincial demand. The Faculty has developed a reputation for the innovative use of teacher consortia that rely on the participation of local educators and school boards when delivering on-site learning in outlying areas of the province. Utilizing resources located elsewhere in the University, the Faculty of Education plans to extend a recently developed model for graduate instruction that allows its graduate students to take part in graduate programs offered by other disciplines. While continuing to search out innovative approaches to program delivery, the Faculty of Education intends to maintain its current specialization in curriculum theory and instructional psychology.

The Faculty of Business will retain its focus on policy analysis, management science, accounting, management information systems, organizational behaviour, industrial relations, international business, finance and marketing. The recent introduction of joint majors combining business with psychology, political science or communication, will be further developed. As in all other areas of the University, the Co-operative Education Program will continue to be a high priority. The Faculty of Business Administration intends to have at least one-third of its students participating in Co-op activities by 1991. New first-year graduate courses designed for the full-time Master of Business Administration Program will enable students from other disciplines to enrol in MBA studies. The Executive MBA Program offered at the Harbour Centre Campus is planning to introduce a weekend format to provide access opportunities for students unable to attend the existing evening Executive MBA courses. In addition, initiatives are underway to

strengthen the B.C. Business Studies Institute and to develop a management of technology option. "Short courses" are also to be offered that will provide access to both functional education and specialized management instruction in tourism, human resource, not-for-profit and women in management specializations.

The Faculty of Arts has carried the greatest burden of recent University growth and the first priority over the next five years will be to bring Arts Faculty enrolments and resources into better balance — a task made all the more difficult as Arts prepares to absorb access growth of 1000 new undergraduate and 100 new graduate FTEs. In an effort to meet the challenge, new baccalaureate programs will be launched in Music, Theatre, Legal Studies. New specializations in environmental and urban studies also will be designed. A joint major involving Women's Studies and the English Department is planned, along with diploma programs in ESL and a joint initiative with the Faculty of Education in Heritage Language instruction. New graduate programs are being designed in Liberal Studies, Spanish and Latin American Studies and International Studies. In conjunction with the University of British Columbia, a new graduate program also is being prepared in Philosophy. Programs with established international reputations will be enhanced and expanded.

The idea of lifelong learning is stated as part of the University's mission. Continuing Studies plays a significant role at Simon Fraser University and will maintain its high profile over the coming years. Working in close cooperation with the Faculties, Continuing Studies carries SFU's extension services into the community and will assume an increasingly active part in the Fraser Valley. Expertise in program planning and curriculum development is available to serve the specialized educational needs of business and industry, professional, cultural and other organizations, and the individual non-traditional student. By offering distance education services and a range of mid-career learning opportunities, the credit and non-credit programs delivered through Continuing Studies will help ensure that working British Columbians and residents in outlying regions have access to professional upgrading and academic instruction.

Graduate studies and research are integral to all academic programs at Simon Fraser University and no projections about program development would be complete without emphasizing that undergraduate and graduate growth go hand in hand. As the faculty complement grows to meet the needs of an expanding undergraduate population, the capacity for graduate supervision also increases. Moreover, graduate students not only stimulate the University's research environment and enrich the University's intellectual life for all students, they are essential to the successful delivery of the undergraduate tutorial system.

In an effort to provide more specific detail about Simon Fraser's academic development plans over the next several years, a list of programs recently approved is presented in Table 1. Additional information about the graduate programs currently under development is supplied in Table 2. Reference also can be made to the program proposals presented in the *Fraser Valley Planning Committee Report*. Although tentative in nature, the *Report* outlines new program opportunities in areas such as environmental studies and health services that are considered appropriate for implementation either at a new degree-granting institution in the Fraser Valley or at SFU's Burnaby Campus. It should also be emphasized that the list of new programs being considered for development is not exhaustive and will be expanded as opportunities, resources and educational needs arise.

TABLE 1

UNDERGRADUATE PROGRAMS RECENTLY APPROVED BY THE SIMON FRASER UNIVERSITY SENATE

	IMPLEMENTATION DATE
Joint Major in Business Administration and Communication	September 1989
Minor in Publishing	September 1989
PBD Occupational Science	September 1989
Honours/Major in Applied Mathematics	September 1989
Co-op Program in Geography	September 1989
Certificate Program ESL Linguistics	September 1989
Co-op Program in Psychology	September 1989
Joint Major in Business Administration and Political Science	September 1989
Joint Major in Communication and Latin American Studies	September 1989
Joint Major in Spanish and French	September 1989
Spanish Language Proficiency Program	September 1989
Major in Film Production	September 1990
Major in Latin American Studies	September 1990
Certificate in Family Studies	September 1990
Certificate in Native Studies	September 1990
Co-op Program in Liberal Arts	September 1990
Joint Major in Business Administration and Psychology	September 1990
Certificate Program in Actuarial Mathematics	September 1990

TABLE 2

NEW GRADUATE PROGRAMS
AT SIMON FRASER UNIVERSITY

	IMPLEMENTATION DATE
Approved by Senate	
Master of Earth Sciences	Approved in principle, awaiting funding
Master of Fine Arts	September 1990 provided funding available
Master of Aquaculture	September 1990
Final Assessment Stage	
Master in Publishing	January 1991
Master of Arts Program in Liberal Studies	January 1991
Doctorate in Engineering Science	January 1991
In Detailed Planning Stage	
Master Program in Tourism Policy	September 1991
Master in Journalism Education	September 1991
Weekend Executive MBA (existing program)	Depending on resources
Expanded Day MBA (existing program)	Depending on resources
Early Planning Stage	
Master in Literacy Education	
Doctorate in Educational Administration	
Master Program in International and Strategic Studies	
Joint MBA/Master in Resource Management	
Doctorate in Resource Management	
Graduate Diploma — Business	

4) Institutional Capacity 1989-1994

Simon Fraser University is in a period of accelerated growth and anticipates enrolment increases averaging 600 undergraduate and 65 graduate FTE for each of the next five. Enrolment targets have been set in consultation with the Ministry of Advanced Education, Training and Technology, but they also reflect institutional judgements about the capacity to absorb growth while strengthening the quality of academic and research programs at the same time. In every instance, the ability to meet the targets will be dependent on receiving additional capital and operating support.

The following factors were taken into account when determining the enrolment projections:

1. The capacity of existing programs to absorb students while maintaining high academic standards.

2. The introduction of new academic programs:

    - that are desirable in their own right
    - that respond to changing educational needs in British Columbia
    - that enrich the program mix offered students
    - that coordinate with other provincial post-secondary institutions

3. The innovative and efficient use of human and physical resources.

    - For example, growth in the short term will rely on Simon Fraser's Harbour Centre Campus, evening programs at the Burnaby Mountain Campus and extension programs in the Fraser Valley.

4. The implementation of a planning process that will produce a new degree-granting presence in the Fraser Valley by September, 1995.

5. The risk involved in making detailed growth projections beyond 1994 before a decision is taken on a new Fraser Valley institution.

By the 1994/95 academic year, graduate enrolments will reach 1565 FTE for an increase of 396 graduate FTE or 25 percent over 1989. At the end of the first five-year planning cycle, SFU can reasonably expect to enrol an undergraduate population of 13,800 FTE, with 260 FTE from this total being delivered through extension programs in the Fraser Valley. The undergraduate enrolment projection represents a 37 percent rise over the 1989 base year. The greatest proportion of the anticipated growth will occur at the Burnaby Mountain campus.

5) Facilities 1989-1994

In September, 1989, Simon Fraser University submitted a detailed Five-Year Capital Plan to the Ministry of Advanced Education, Training and Technology. The document describes the critical space shortfall now being experienced and points out that the student population increased by 60 percent between 1977 and 1988 while the University's space inventory expanded by only 23 percent. Classrooms are so heavily utilized that no flexibility remains to make course selection changes at the beginning of a semester. Office space for faculty, staff and graduate students is grossly insufficient. Additions to the Library can only be made by encroaching on already inadequate student study areas. Laboratory space is at a premium. Student residential facilities fall deplorably short of the access demand. And space for student amenities, food services and recreational use is overcrowded to the point that it seriously erodes the quality of university life.

By conservative estimate, the space shortfall for 1989/90 exceeds 325,000 net assignable square feet. The implications are obvious: because Simon Fraser University does not have sufficient space to address its current needs adequately, access growth will be constrained until the existing shortfall is remedied and additional facilities are provided.

The Ministry has responded positively to recent capital requests by allocating funds for the construction of a new 25,000 net assignable square foot Classroom Building and a 75,000 net assignable square foot Molecular Biology and Bio-Chemistry Building. Both projects are proceeding toward construction and should be ready for occupancy during the 1992/93 academic year.

While these welcome additions to the space inventory will provide a measure of relief, enrolment growth, combined with the space shortfall that continues to be carried forward, will still leave Simon Fraser University with a deficit of approximately 300,000 net assignable square feet when the two new buildings come into service. The need to fast-track all construction and public works projects identified in the Five-Year Capital Plan remains urgent.

With three notable exceptions, the table on the next page summarizes Simon Fraser University's facilities development priorities for the period 1989 to 1994. First, every effort will be made to complete SFU's Harbour Centre Campus Phase III expansion in time for the 1991/92 academic year. If sufficient funds cannot be found, the students that would otherwise be accommodated by the expansion will necessarily add to space problems on Burnaby Mountain. Second, the need is intense for a "bridging" building to house faculty and graduate students and the University has taken committed planning funds for a new 15,000 net assignable square foot wood-frame structure. Emergency assistance from government will be needed to undertake and complete construction by September, 1990. Third, the University is requesting permission to collapse Phases I and II of the proposed Business and Management Sciences Building into a single, accelerated project.

The table also includes a reference to a "Fraser Valley Campus" and makes a tentative estimate about its cost. This entry in the Capital Plan is intended as a "place holder" only and does not claim ownership by Simon Fraser University or pretend to be a precise calculation of the costs that might be involved.

SIMON FRASER UNIVERSITY
5 Year Capital Plan
Summary of Major Projects

	Request Approval	Complete Project	Estimated Project Cost(7)	Estimated Equipment Cost(8)	Estimated Cost of related Renovations	Total Cost
			('000)	('000)	('000)	('000)
A. Buildings						
1. Business and Management Sciences...Phase I (1	1990	1993	$26,040	$1,755	$1,000	$28,795
2. Teaching Addition (2)	1989	1991	8,420	920		9,340
3. Business and Management Sciences...Phase II	1991	1994	23,930	1,824	1,500	27,254
4. Residence subsidy (3)	1991	1993	7,200			7,200
5. Student Services (4)	1992	1995	14,800	1,045	1,000	16,845
6. Film and Performing Arts	1992	1995	11,340	1,145	250	12,735
7. Applied Science Phase II	1993	1995	21,380	1,719	300	23,399
8. Administration Building Expansion	1993	1995	5,200	426	400	6,026
9. University Centre Expansion	1994	1996	2,000			2,000
10. Facilities Management Building Expansion	1994	1996	1,080	85		1,165
11. Gymnasium Facilities	1994	1996	5,000	45		5,045
			126,390	8,964	4,450	139,804
B. Public Works						
1. Central Mall structure rehabilitation (5)	1990	1991	2,070			2,070
2. Road rehabilitation Phase II	1990	1990	1,080			1,080
3. Parking Structure	1991	1993	6,480			6,480
			9,630			9,630
C. Fraser Valley Campus (6)	1990	1993	95,000			95,000
TOTALS			$231,020	$8,964	$4,450	$244,434

NOTES: (1) Planning funds will be requested in early 1990, for disbursement in April, 1990.
(2) This $8.4M project is being planned this year in conjunction with the Molecular Biology building (IMBB).
(3) Total cost for these 500 beds is expected to be $15.3M
(4) If approved, this project will lessen the cost of project A8.
(5) This is an emergent request to repair a weakening floor structure
(6) This project is still under discussion; the amount excludes land, service, and equipment costs and is noted here as a "place holder" at this time.
(7) For projects with approval dates in 1990 &1991, estimated costs are in September, 1989 dollars plus inflation at 0.8%/month to project completion. Projects with request approval dates in later years have estimated costs

6) Environmental Scan 1995-1999

Predicting the factors that could influence Simon Fraser University's development in the closing five years of the century is highly problematic. The single most important variable will be the government's decision whether or not to establish a new degree-granting institution in the Fraser Valley. If one is not created, SFU's Burnaby Campus will be the destination for most of the estimated 3900 FTE students who would otherwise be enrolled there. If a new institution is a developed as an SFU Campus, the impact on the University's program mix, human resources and administrative arrangements will be profound. If it is established as an autonomous university, enrolment pressure on Simon Fraser will decline accordingly.

This fundamental issue aside, some general predictions about the University's future can be made. By 1997, children of the "Echo Boom" will begin entering the post-secondary system in large numbers. Their mass arrival in search of higher education will further precipitate the faculty recruitment crisis that already will be making its effect known on the university community across North America. At the same time, access demand from lifelong learners will intensify as the population aging trend continues and as the recurrent educational needs of the work force increase.

The University's role in graduate instruction and research will grow throughout the 1990s. Research and development needs will intensify both provincially and nationally and the University will play its part by increasing its own research capacity and by supplying qualified researchers for the public and private sectors. The growth in pure and applied scientific inquiry will be accompanied by a reaffirmation of the contribution made by research in the humanities and the social sciences, especially their capacity for bringing the power of critical thinking to bear on social, cultural and economic problems.

SFU Burnaby Mountain, presently a "commuter campus", could have a permanent residential population ten years from now that will enliven its sense of academic community. The Harbour Centre Campus will enjoy a respected presence in downtown Vancouver and will be regarded inter-

nationally as a model to emulate. Beyond these very general predictions for growth and evolution, the future remains unknown terrain.

7) Facilities 1995-1999

The facilities needs at Simon Fraser University over the period 1995-1999 are contingent on the successful implementation of the 1989-1994 Capital Plan. The speed at which the space shortfall recovery takes place, the pace of enrolment growth, and decisions about a new Fraser Valley institution will affect future capital plans. At present, there are too many unknowns to hazard a prediction about facilities requirements in the late 1990s.

APPENDIX VI

VI. ENROLMENT AND PARTICIPATION RATE SHORTFALLS: DETAILED ANALYSIS

EXCLUSIVE MODEL FOR ACADEMIC FTE ENROLLMENTS

Year	Population ('000)	Regional FTE Participation using Canadian Average of 24.4 FTE per 1000 Pop.	Regional FTE Participation using B.C. Average of 21.0 FTE per 1000 Pop.	Regional FTE Participation ....1989 is actual	Regional FTE Participation per 1000 Population	Kwantlen College FTE Capacity	Douglas College FTE Capacity	Fraser V. College FTE Capacity	New Degree Institution FTE Capacity	Total FTE Capacity	Estimate of Net Migration out of Region	Capacity Shortfall
1989	728.0	17,762	15,287	8,456	11.6	1,380	90	670	60	2,200	6,256	0
1994	834.8	20,368	17,530	15,033	18.0	4,350	200	2,000	260	6,810	7,326	897
1999	926.8	22,615	19,463	22,615	24.4	7,200	200	2,780	4,320	14,500	7,476	639

Notes

a. The "Exclusive" region encompasses the School Districts of Richmond, Delta, Surry, Langley, Maple Ridge, Mission, Abbotsford, Agassiz-Harrison, Chilliwack, and Hope.

b. The "Regional FTE Participation" is an estimate of the number of FTE students originating from the region who participate in Post-Secondary Education Programs in B.C., regardless of Institution. The estimate for 1989 was arrived at by using preliminary Link File data to catagorize each Institution's FTE enrollments by regional origin of student.

c. Douglas College FTE Capacity includes Maple Ridge Campus only.

d. For 1989 and 1994 the New Degree Institution FTE capacity is that delivered by SFU Credit Extension Programs.

e. The "Estimate of Net Migration from Region" for 1989 is calculated by subtracting the "Total FTE Capacity" from "Regional FTE Participation". For 1994 and 1999, the estimates of net migration are set at 1989 levels but are adjusted by assuming that1/2 of the FTE increases at SFU/Bby and Douglas/NWest will come from the "Exclusive" region.

EXCLUSIVE MODEL FOR ALL PROGRAM FTE ENROLLMENTS

Year	Population ('000)	Regional FTE Participation using Canadian Average of 44.7 FTE per 1000 Pop.	Regional FTE Participation using B.C. Average of 34.6 FTE per 1000 Pop.	Regional FTE Participation ....1989 is actual	Regional FTE Participation per 1000 Population	Kwantlen College FTE Capacity	Douglas College FTE Capacity	Fraser V. College FTE Capacity	New Degree Institution FTE Capacity	Total FTE Capacity	Estimate of Net FTE Migration out of Region	Capacity Shortfall
1989	728.0	32,539	25,187	13,365	18.4	3,690	200	1,920	60	5,870	7,495	0
1994	834.8	37,314	28,883	26,320	31.5	9,660	500	5,020	260	15,440	8,670	2,210
1999	926.8	41,429	32,068	41,429	44.7	16,000	500	6,770	4,320	27,590	8,920	4,919

Notes

a. The "Exclusive" region encompasses the School Districts of Richmond, Delta, Surry, Langley, Maple Ridge, Mission, Abbotsford, Agassiz-Harrison, Chilliwack, and Hope.

b. The "Regional FTE Participation" is an estimate of the number of FTE students originating from the region who participate in Post-Secondary Education Programs in B.C., regardless of Institution. The estimate for 1989 was arrived at by using preliminary Link File data to catagorize each Institution's FTE enrollments by regional origin of student.

c. Douglas College FTE Capacity includes Maple Ridge Campus only.

d. For 1989 and 1994 the New Degree Institution FTE capacity is that delivered by SFU Credit Extension Programs.

e. The "Estimate of Net Migration from Region" for 1989 is calculated by subtracting the "Total FTE Capacity" from "Regional FTE Participation". For 1994 and 1999, the estimates of net migration are set at 1989 levels but are adjusted by assuming that1/2 of the FTE increases at SFU/Bby and Douglas/NWest will come from the "Exclusive" region.

COMPREHENSIVE MODEL FOR ALL PROGRAM FTE ENROLLMENTS

Year	Population ('000)	Regional FTE Participation using Canadian Average of 44.7 FTE per 1000 Pop.	Regional FTE Participation using B.C. Average of 34.6 FTE per 1000 Pop.	Regional FTE Participation ....1989 is actual	Regional FTE Participation per 1000 Population	Kwantlen College FTE Capacity	Douglas College FTE Capacity	Fraser V. College FTE Capacity	New Degree Institution FTE Capacity	SFU@ Burnaby & H. C. FTE Capacity	BCIT FTE Capacity	Total FTE Capacity	Estimate of Net FTE Migration into Region	Capacity Surplus
1989	1,052.7	47,055	36,423	30,155	28.6	3,690	4,340	1,920	60	12,245	8,560	30,815	660	0
1994	1,189.7	53,180	41,164	43,630	36.7	9,660	7,640	5,020	260	14,935	8,560	46,075	660	1,785
1999	1,302.1	58,203	45,052	58,203	44.7	16,000	10,100	6,770	4,320	15,037	8,560	60,787	660	1,924

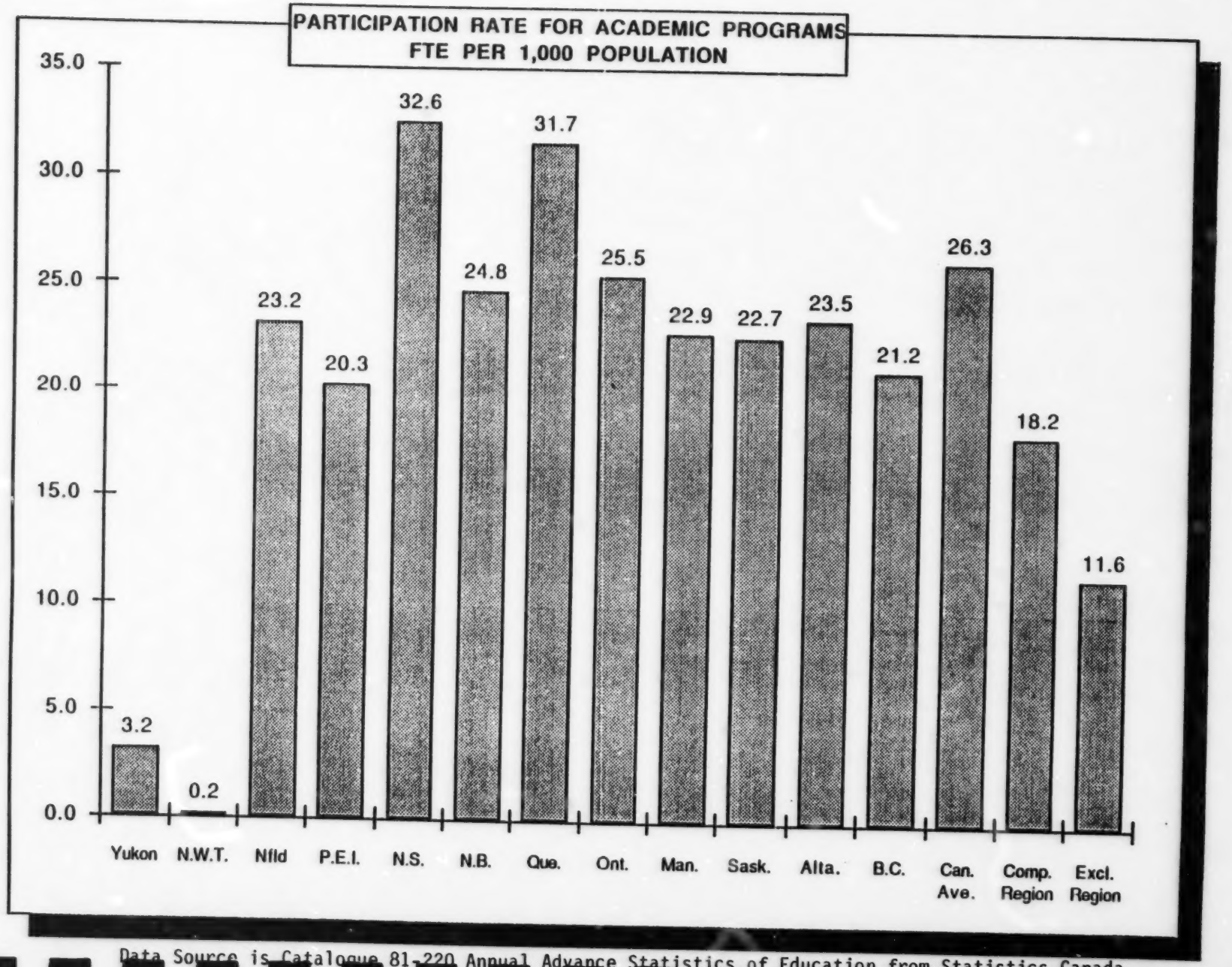
Notes

a. The "Comprehensive" region encompasses the Douglas, Kwantlen, and Fraser Valley College Regions. This includes the School Districts of Burnaby, Coquitlam, New Westminster, Richmond, Delta, Surry, Langley, Maple Ridge, Mission, Abbotsford, Agassiz-Harrison, Chilliwack, and Hope.

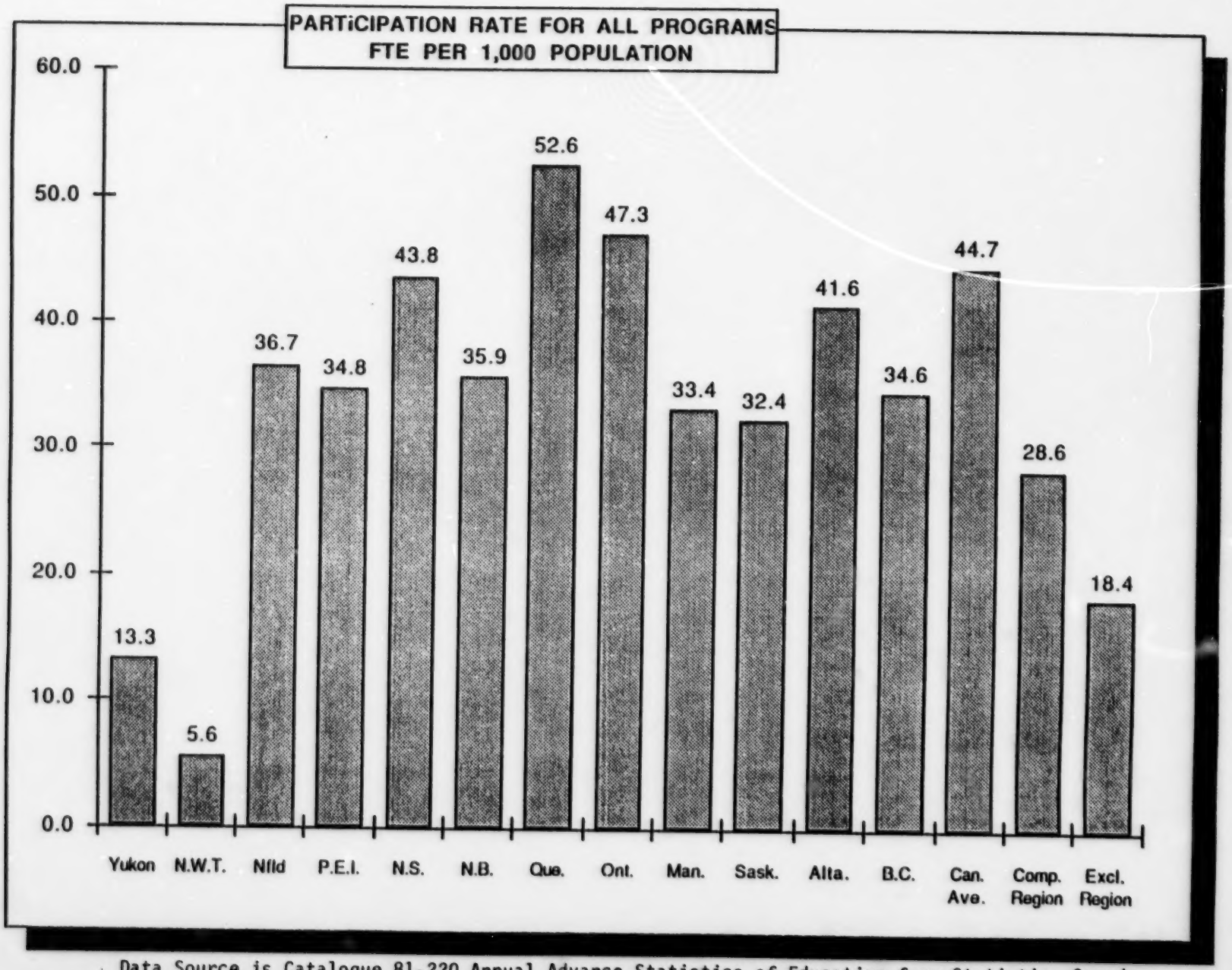
b. The "Regional FTE Participation" is an estimate of the number of FTE students originating from the region who participate in Post-Secondary Education Programs in B.C., regardless of Institution. The estimate for 1989 was arrived at by using preliminary Link File data to catagorize each Institution's FTE enrollments by regional origin of student.

c. For 1989 and 1994 the New Degree Institution FTE capacity is that delivered by SFU Credit Extension Programs.

d. The "Estimate of Net FTE Migration into Region" in 1989 is calculated by subtracting the "Regional FTE Participation" from "Total FTE Capacity". For 1994 and 1999, the estimates of net migration are set at 1989 levels.



Data Source is Catalogue 81-220 Annual Advance Statistics of Education from Statistics Canada.



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